FM 9-47

FIELD MANUAL

SPECIAL AMMUNITION UNIT OPERATIONS

HEADQUARTERS, DEPARTMENT OF THE ARMY

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DEPARTMENT OF THE ARMY
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SPECIAL AMMUNITION UNIT OPERATIONS

AGO 8185A

CHAPTER 1

INTRODUCTION

1–1. Purpose and Scope

a. The purpose of this manual is to present unit operational techniques and procedures for special ammunition service support in the theater of operations.

b. This manual will provide guidance to commanders, staff officers, and other personnel involved in logistical functions of special ammunition items.

c. The unit organizational structure of the special ammunition service support is capable of being tailored to varying force structures and will be responsible for all levels of conflict and combat capabilities.

d. The scope of this manual encompasses the supply of special ammunition associated repair parts and explosive components, maintenance of special ammunition, maintenance of associated test and handling equipment, safety, and security controls and escort service.

e. The missions, functions, and tasks of the units and organizations discussed are, with the exception of those pertaining to lethal and incapacitating chemical munitions, as shown in the TOE specifically identified in the narrative. Methods and responsibilities for release of lethal and incapacitating chemical munitions, as shown in the TOE specifically identified in the narrative. Methods and responsibilities for release of lethal and incapacitating chemical munitions will be specified by the granting authority.

f. Users of this manual are encouraged to submit recommended changes and comments to improve the manual. Comments should be keyed to the specific page, paragraph and line of the text in which the change is recommended. Reasons will be provided for each comment to insure understanding and complete evaluation. Comments should be prepared using DA Form 2028 (Recommended Changes to Publications) and forwarded direct to the Commandant, U.S. Army Missile and Munitions Center and School, ATTN: ATSMM–ND, Redstone Arsenal, Alabama 35809.

1–2. Ammunition

a. The term ammunition is defined as a contrivance charged with explosives, propellents, pyrotechnics, initiating composition, or nuclear, or chemical material for use in connection with defense or offense including demolitions. Certain ammunition can be used for training, ceremonial, or nonoperational purposes.

b. Ammunition is divided into two categories.

(1) *Conventional Ammunition.* Conventional ammunition includes all ammunition items which do not require extraordinary control, handling or security. Included are small arms, tank and artillery ammunition: high-density, low-maintenance rockets and missiles; mines, grenades, pyrotechnics, and high explosives; and certain chemical ammunition items (ammunition filled with smoke, incendiary, and riot control agents). Bursters and igniters for chemical ammunition, and peptizers and thickeners for flame fuels are grouped as conventional ammunition. When the same propelling charge is used for special and conventional ammunition, the charge is considered to be an item of conventional ammunition; and only those quantities required to insure complete rounds of special ammunition are stored and issued with special ammunition items.

(2) *Special.* This category or classification is used for ammunition items that require extraordinary control, handling or security. This category includes nuclear and nonnuclear warhead sections; atomic demolition munitions; nuclear projectiles; and associated spotting rounds, propelling charges, and repair parts. It also includes missile bodies (except missiles combining high-density, low-maintenance, and conventional ammunition features); related components of missile bodies, less repair parts; and missile propellents. *For the purpose of this manual lethal and incapacitating chemical agents and munitions have been excluded from this category.*

1–3. Special Ammunition Supply System Characteristics

Special ammunition service is unique or peculiar in the following major respects:

a. It is national policy that very stringent controls be placed upon the use of special ammunition. Every action to supply special ammunition to any source in a theater of operations—whether it be the placing of rounds in a special ammunition storage facility, the establishment of a special ammunition load for a firing unit, or the replenishment of special ammunition stockage—requires that a command decision be made to tactical channels.

b. Security measures must be applied to all phases of requisition, receipt, storage, and shipment of special ammunition. Physical security must be provided wherever stocks are handled. Logistical data and accounting information cannot be reported in the conventional manner, *i.e.*, transmittal of uncoded information by unclassified means.

c. Rigid technical maintenance requirements must be satisfied and mandatory special reports must be maintained on each round of special ammunition until it is actually expended. Accordingly, special ammunition is not considered as expended when issued to a using unit.

d. Vigorous safety programs and practices by special ammunition units will minimize the possibility of accidental injury to personnel, or damage to equipment, ammunition stocks or facilities. Explosions, fires, or nuclear contamination represents the greatest hazards. Personnel must be equipped with appropriate individual protective equipment and thoroughly trained in the safety measures applicable to the operations being performed.

1–4. Allocation and Control

a. The basic load and continuous refill (or automatic resupply) system used for conventional ammunition *does not* apply to special ammunition. Special ammunition service in the field is based on a system of special ammunition allocations, special ammunition stockages, and special ammunition loads.

(1) *Special Ammunition Allocation.* A special ammunition allocation is the designation, for planning purposes, of special ammunition a commander may expend when the use of such ammunition is authorized. It does not necessarily indicate physical custody or possession. Allocations to a commander may include special ammunition for delivery by units not under his command, such as supporting air force or higher echelon artillery.

(2) *Special Ammunition Load (SAL).* The SAL is the specific quantity of special ammunition to be carried by a delivery unit. The establishment and replenishment of this load after each expenditure is a command decision and is dependent upon the mission, the tactical, and logistical situation and the capability of this unit to transport and utilize the load. It may vary from day to day and among similar delivery units. When referring to nuclear weapons only the term (*Prescribed Nuclear Load (PNL)* will be used.

(3) *Special Ammunition Stockage (SAS).* The SAS is the specific quantity of various special ammunition items to be stocked in an ordnance unit or installation. The establishment and replenishment of this stockage is a command decision and is dependent on the tactical and logistical situation and the capability of the unit concerned to perform the special functions required by this ammunition while it is in the unit's custody. Special ammunition stockage may vary from day to day and among similar special ammunition units. When referring to nuclear weapons, nuclear weapons components, and nuclear weapon test equipment only, the term (*Prescribed Nuclear Stockage (PNS)* will be used.

(4) *Allocation (Nuclear).* A nuclear allocation is the apportionment of specific numbers and types of nuclear weapons to a commander for a stated period as a planning factor used in the development of war plans. (Additional authority is required for the actual dispersal of allocated weapons to locations desired by the commander to support his war plans. Expenditures of these weapons is not authorized until released by proper authority.)

(5) *Assignment (Nuclear).* A nuclear assignment is the specified number of complete nuclear rounds authorized for expenditure by a commander. An assignment may be for a specific period of time, for the phase of an operation, or to accomplish a particular mission.

b. The Joint Chiefs of Staff exercise rigid control over special ammunition and allocate specia' ammunition to oversea theater commanders on the basis of mission, assignment of delivery units, availability of items, operational requirements, and other considerations identified in AR 700–65 and FM 101–10–3. Requisitions are not submitted

for initial dispersal of major assemblies and nuclear components, except for direct exchange/replacement activity. The Department of the Army is responsible for matters pertaining to the dispersal of nuclear weapons. Allowances of nuclear ordnance test, handling, and training equipment; establishment of a test, handling and training equipment maintenance float; repair parts stockage; and requirements for special design test and handling equipment are in accordance with AR 700–65.

c. Within the theater, special ammunition is positioned with firing units and special ammunition companies in accordance with appropriate positioning documents. These documents show special ammunition allocated from commanding general to commanding general beginning at theater army and ending at combat divisions.

(1) Actual location of stocks considers present and anticipated missions; weapons availability; firing unit carrying capacity; the lift, storage, and maintenance capability of special ammunition companies; dispersion; and type of munitions.

(2) In the field army, coordination is effected by the SALE (Special Ammunition Logistics Element) at the FATOC (Field Army Tactical Operations Center) and CTOC (Corps Tactical Operations Center) to determine quantities by type that are to be positioned in each firing unit, special ammunition supply point (SASP), and other storage location for special ammunition. Changes are made to his positioning consistent with the guidance of the field army and corps commanders. Coordination is effected between theater army and the Supply and Maintenance Command to position special ammunition in Communications Zone (COMMZ) special ammunition installations.

1–5. Peculiarities Of Special Ammunition Service Support

Special ammunition requires more sophisticated logistical procedures than those used with conventional ammunition. The most notable differences are:

a. Accountability. The high cost, tactical influence and political sensitivity inherent to special ammunition items requires that the accountability for each weapon be accurate and precise.

b. Security requirements. The security classification of specified special ammunition items and related data precludes using conventional procedures for (1) preparation, submission and transmission of logistical information, (2) storage and handling techniques, (3) movement control and (4) personnel assignments.

c. Maintenance. The rigid technical maintenance and related reports required on each round of special ammunition have no parallel in conventional procedures.

d. Stock Status. When dealing with special ammunition, timeliness of information is of greatest importance. The tactical commander must know, at all times, the quantity, type, yield, ownership, location, and condition of special ammunition within his command. It is important to note that special ammunition is not considered to have been expended until it actually has been expended by a using unit.

CHAPTER 2

LOGISTICAL SUPPORT UNITS

2-1. Purpose

This chapter provides data on the organization, employment, and mission of headquarters and units involved in the supply, maintenance, and accountability of special ammunition and associated equipment. Figure 2-1 depicts the ammunition service support organization for the COMMZ and figure 2-2 for the field army.

2-2. Ammunition Group, DS/GS

a. Staff Composition. The ammunition group is a major subordinate headquarters of the supply and maintenance command, TASCOM, and the corps support brigades, FASCOM. Staff composition includes a group of officers as well as enlisted specialists trained to a particular aspect of ammunition service or administrative support. Also included are clerical personnel to perform typing, consolidation of data, maintenance of records and status boards, and other administration related to group operations.

b. Mission. The mission of each ammunition group is to exercise command and operational control over 2 to 6 ammunition battalions. The group supervises supply and maintenance of special ammunition and guided missile peculiar repair parts, and conventional ammunition stocks within assigned area of responsibility. It also directs rear area security and area damage control activities within the ammunition group. Staff supervision over the ammunition groups is exercised by the ACofS, Supply, supply and maintenance command, in the communications zone (COMMZ) and corps support brigades in the field army. Basis of allocation of the groups is one per supply and maintenance command, TASCOM, in the COMMZ and one per corps support brigade in the field army.

c. Concept of operations.

(1) The ammunition group headquarters is capable of providing command and operational control over two ammunition battalions providing ammunition service support to a corps slice of the field army and up to 6 ammunition battalions per 12 division field army in the COMMZ. The headquarters and headquarters company, ammunition group, is 75 percent mobile and is air transportable. It conducts its operations under the staff supervision of the chief of the ammunition service element, ACofS, Supply, supply and maintenance command or corps support brigade, as appropriate.

(2) Maintenance and supply procedures within the ammunition group are established by the group materiel staff consistent with the directives and instructions of the supply and maintenance command staff in the COMMZ and the corps support brigades in the field army. The corps support brigade stock control center (SCC) provides the ammunition group selected data for managerial purposes. Data in regards to shipments, issues, and receipts are transceived either by supply points or by ammunition battalions direct to the ICC (Inventory Control Center) or SCC (Stock Control Center), as appropriate. The group materiel staff also receives a daily status of stocks printout. It interprets the information, from a managerial point of view, to balance the workload among the subordinate units of the group and to resolve problem areas.

(3) Rear area damage control staff supervision will be exercised by the group for all of its subordinate units. RAS/ADC operations will be in accordance with the policies established by the appropriate headquarters in the field army or COMMZ.

2-3. Ammunition Battalion, DS and DS/GS

a. Staff Composition. The ammunition battalions, both DS and DS/GS, are major subordinate headquarters of the ammunition group, DS/GS. Staff composition includes a group of officers and enlisted specialists trained in a particular aspect of ammunition service or administrative support. Also included are clerical personnel to perform typing, consolidation of data, maintenance of records and status boards, and other administration related to battalion operations.

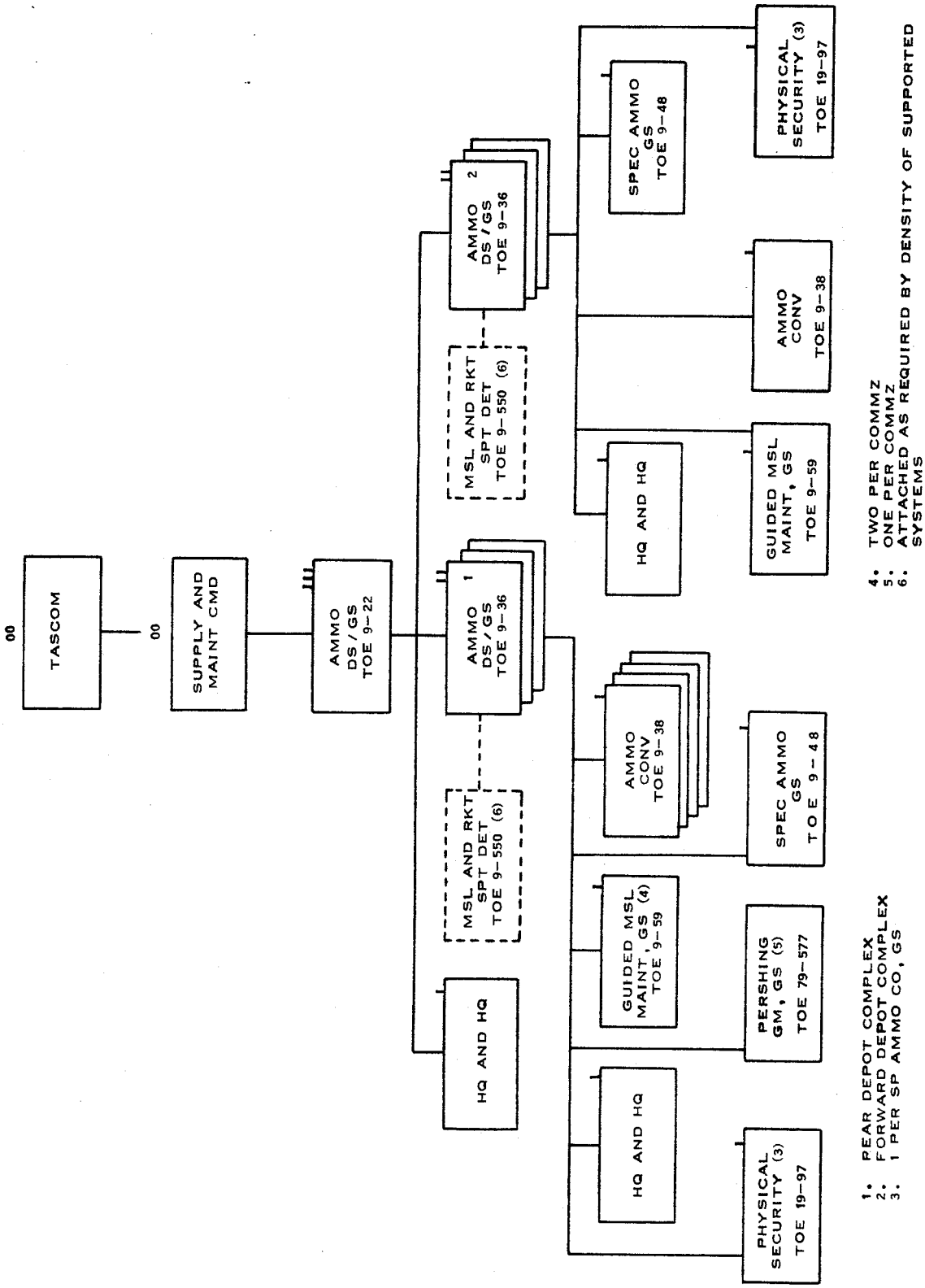


Figure 2–1. Ammunition service support organization, COMMZ (supporting a three-corps field army).

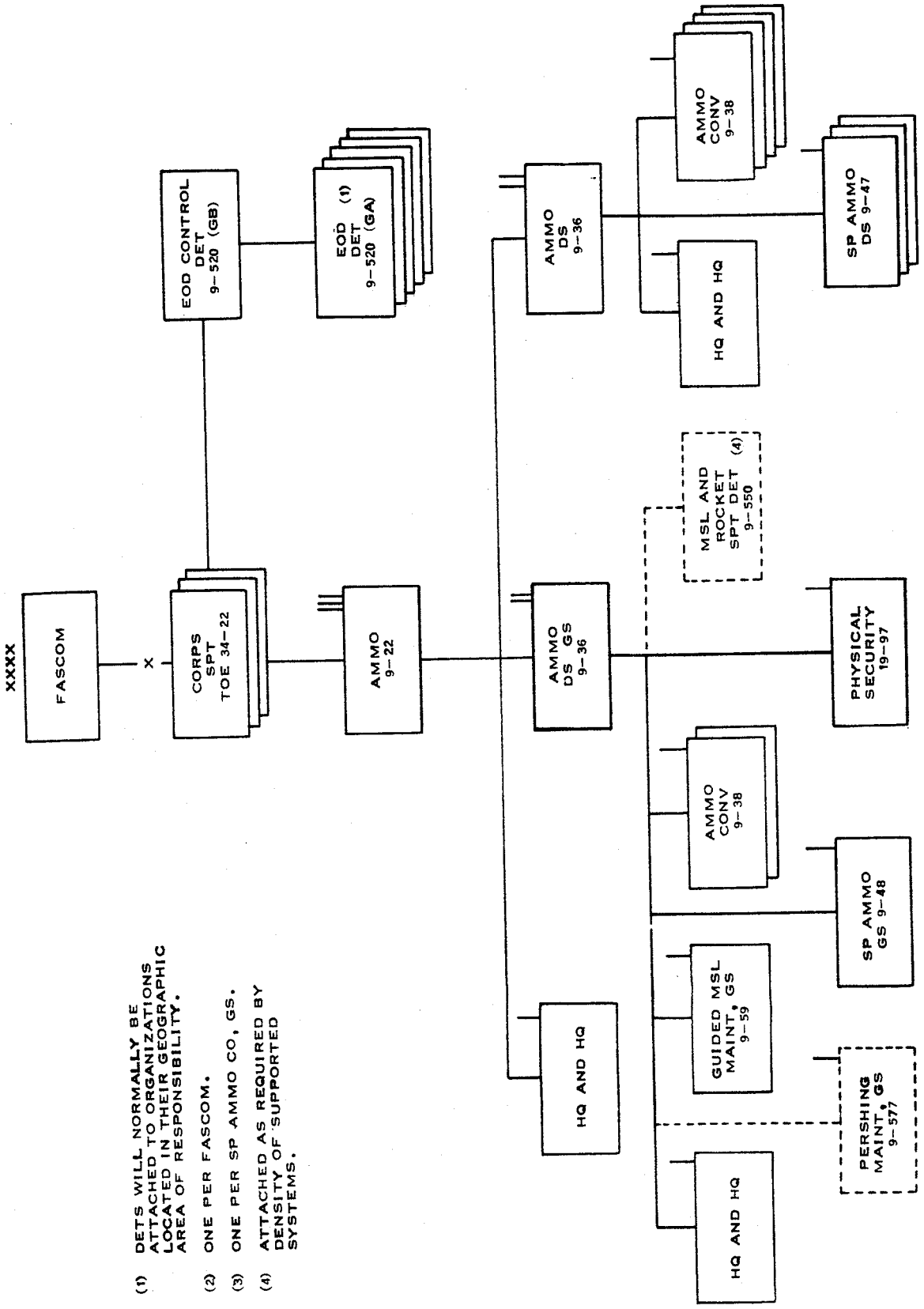


Figure 2-2. Ammunition service support organization, field army.

b. Mission. The mission of each ammunition battalion is to exercise command and operational control over attached ammunition service companies. Basis of allocation is one DS and one DS/GS ammunition battalion per ammunition group, DS/GS, in the field army and four to six DS/GS battalions per ammunition group, DS/GS, in the (COMMZ).

c. Concept of operations.

(1) The ammunition battalions are capable of providing command and operational control over attached companies as follows:

(*a*) One DS battalion for four Conventional Ammunition Companies, (TOE 9–38) and three Special Ammunition Companies, (TOE 9–47) or any other combination of the two up to a total of seven companies.

(*b*) One DS/GS battalion for one to four Conventional Ammunition Companies, Direct Support/General Support, (TOE 9–38); one Guided Missile Maintenance Company, General Support, (TOE 9–59); and one Special Ammunition Company, General Support (TOE 9–48). The DS/GS battalion, or Special Ammunition Company, General Support, also provides control over a Military Police Physical Security Company (TOE 19–97) attached to the TOE 9–48 company.

(2) The battalion headquarters is the command link between the ammunition group and operating companies under the battalion. It insures compliance with group operational guidance and, with information received through the ADP system, directs actions to the attached operating companies. The headquarters and headquarters company, ammunition battalion, is 100 percent mobile and air transportable.

(3) When commanding direct support elements in the combat zone, the battalion headquarters is usually located near the division rear boundary. In the direct support role the battalion headquarters and its operating companies will be located so as to provide maximum support to combat elements. When commanding general support elements in the combat zone, the battalion headquarters is usually located in the vicinity of the corps rear boundary. Generally, battalion headquarters will receive movement instructions, mission assignments, and general geographical areas for operations from group headquarters. Close liaison is required with the area commander to obtain specific real estate from which to operate.

(4) In the COMMZ the ammunition battalion is assigned to an ammunition group which provides ammunition service support to an entire field army and to a field army slice of the COMMZ. The ammunition battalion operates an ammunition depot complex in either the forward or rear portion of the COMMZ. The operations of a forward depot complex will consist primarily of reserve storage, and emergency shipments to offset interrupted shipments from rear ammunition depot complexes.

(5) An ammunition depot complex will consist generally of a special ammunition depot, a conventional ammunition depot, and in some cases, a guided missile maintenance facility. Each will be dispersed to increase passive defense and to permit maximum effective use of existing facilities and terrain. Each depot will pool the resources of its several operating companies to make maximum use of their combined capabilities and to achieve economy in the operation of available equipment.

(6) COMMZ ammunition depot complexes will maintain minimum stock records and lot-locator records to assure continuity of operation in the event of failure in the ADP system. Issues and receipts are accomplished by the depots as directed by the supply and maintenance command. Advance information as to anticipated issues and receipts are provided each ammunition depot complex through the ADP system to facilitate battalion planning of depot operations and effective use of equipment, facilities, and manpower.

(7) Ammunition depot complexes will provide direct support to units located in COMMZ from the depot location. If and when this direct support detracts from the support provided the field army, direct support ammunition units may have to be provided.

2–4. Ordnance Special Ammunition Company, Direct Support

a. Organization. The Special Ammunition Supply Company, Direct Support (TOE 9–47) is organized, as shown in figure 2–3, to provide special ammunition direct supply support.

(1) Company headquarters is staffed to provide the normal functions of command, administration, mess, unit supply, and organizational maintenance of equipment. Company headquarters supervises the mission functions of the company. Supply requests and transportation orders are processed, data is maintained on the status of

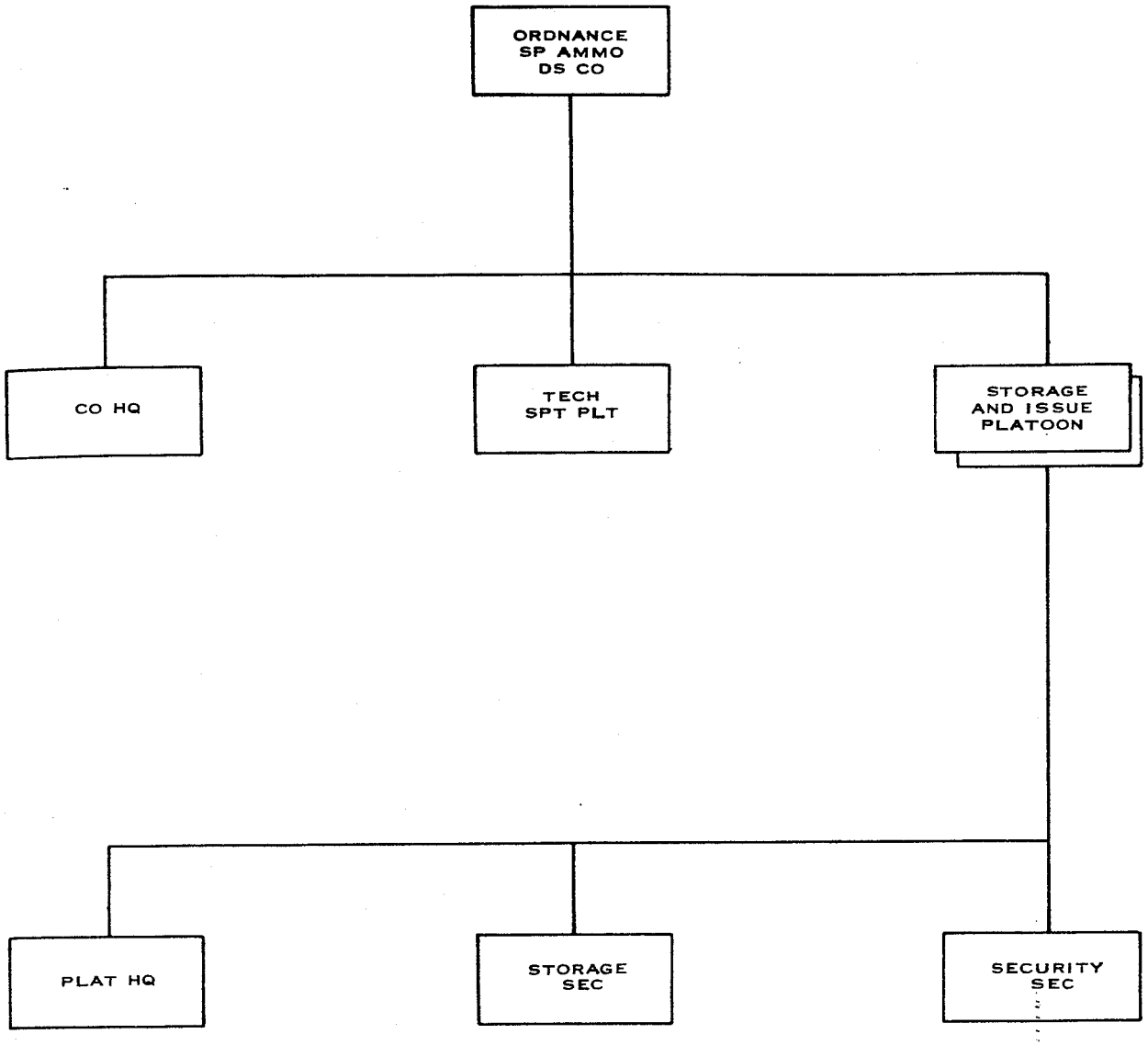


Figure 2-3. Ordnance special ammunition direct support company, TOE 9-47.

stocks, and interface is established with corps support brigade SCC. Communications and data transmission services are provided for the company. Personnel are also provided to maintain the company CLASSIFIED documents control register, assist in conducting stockpile inventories, and in preparing the security plans for the company.

(2) The technical support platoon provides for the inspection and monitoring of special ammunition stocks. It provides maintenance calibration for its own nuclear weapons test equipment as well as that of user units. It provides, through the technical supply section, repair parts supply support for nuclear weapons test equipment and special ammunition warhead sections. It serves as the distribution point for nuclear weapons training material and nuclear weapons-peculiar test and handling equipment.

(3) Each storage and issue platoon provides the personnel and equipment necessary to operate a special ammunition supply point (SASP). Each platoon has the materials handling equipment, cranes, and operators to support the storage operations of the platoon. The storage sections have the personnel and equipment to receive, store, and issue mission stocks. Personnel assigned to these sections perform visual inspection and surveillance of stored missile and rocket munitions. Trucks and semitrailers organic to these sections provide 100 percent mobility for mission stocks. The security section of each platoon provides security personnel for internal security and access

control into the restricted or sensitive areas of the platoon. It provides gate guards and roving patrols.

b. Mission and Capabilities.

(1) The mission of the company is to:

(*a*) Establish and operate two special ammunition supply points (SASP) for the receipt, storage, and issue of special ammunition, special ammunition repair parts, nuclear weapons training materiel, and nuclear weapons peculiar test and handling equipment.

(*b*) Provide technical assistance to supported units.

(*c*) Provide for the evacuation of unserviceable items to general support special ammunition units.

(2) The company, at full strength, can establish two special ammunition supply points which provide for the:

(*a*) Receipt, storage, and issue of mission items.

(*b*) Security for classified storage and for movement of classified materiel between unit storage areas.

(*c*) Technical assistance to supported units upon request.

(*d*) Emergency destruction of nuclear weapons when required.

c. Assignment and Allocation. The company may be assigned to a Field Army Support Command, Corps Support Brigade, Independent Corps, or to the Theater Army Support Command. Its normal attachment is to a headquarters and headquarters company, ammunition battalion (TOE 9–36). The company is allocated to the field army on the basis of three for each corps. It is allocated to the COMMZ as required.

d. Method of Operation.

(1) The company provides complete round special ammunition supply support, normally on a supply point distribution basis, to firing units in the combat zone. It does not normally support nuclear firing artillery battalions in the COMMZ. Direct support of such units is a function of the special ammunition company, general support, discussed elsewhere. However, one SASP of this company or the entire unit may be attached to an ammunition battalion in the COMMZ if justified by workload and tactical requirements.

(2) This company has an organizational maintenance capability only. Maintenance support for nuclear special ammunition must be provided by the Ordnance Special Ammunition Company, General Support/Direct Support (TOE 9–48), and maintenance support for missile systems must be provided by guided missile maintenance organizations. To the extent practicable, direct exchange of warhead sections with the special ammunition company, general support, will be employed to insure that the DS company's special ammunition stocks are in a ready-for-issue condition.

(3) There are two SASP radio nets required in the company. One net is required for command and control and to provide the company commander communications with the ammunition battalion, ammunition group, and corps support brigade. The second net is required to control physical security. Organic wire nets provide the telephones and switchboard necessary for communications within the unit and, when connected to the area signal communications network, for communication with adjacent and higher headquarters. Radio teletypewriter communications, including encryption and decryption equipment, are provided for the submission of classified reports.

(4) Normal deployment establishes one SASP with the control section of company headquarters and the other at a separate location.

2–5. Ordnance Special Ammunition Company, General Support/Direct Support

a. Organization. The Ordnance Special Ammunition Company, General Support/Direct Support (TOE 9–48) is organized, as shown in figure 2–4, to provide special ammunition general support to direct support special ammunition units and special ammunition direct support to firing organizations as required.

(1) Company headquarters is staffed to provide the normal functions of command, administration, mess, unit supply, and organizational maintenance of equipment.

(2) The control section is staffed to supervise the mission functions of the company. Section personnel maintain special ammunition stock accounting and control records and provide data on receipts, issues, and changes in condition to the designated stock/inventory control center. They coordinate and control the receipt, storage, and shipment of stocks. Personnel are provided to maintain the company classified document control register and to provide communications for the company.

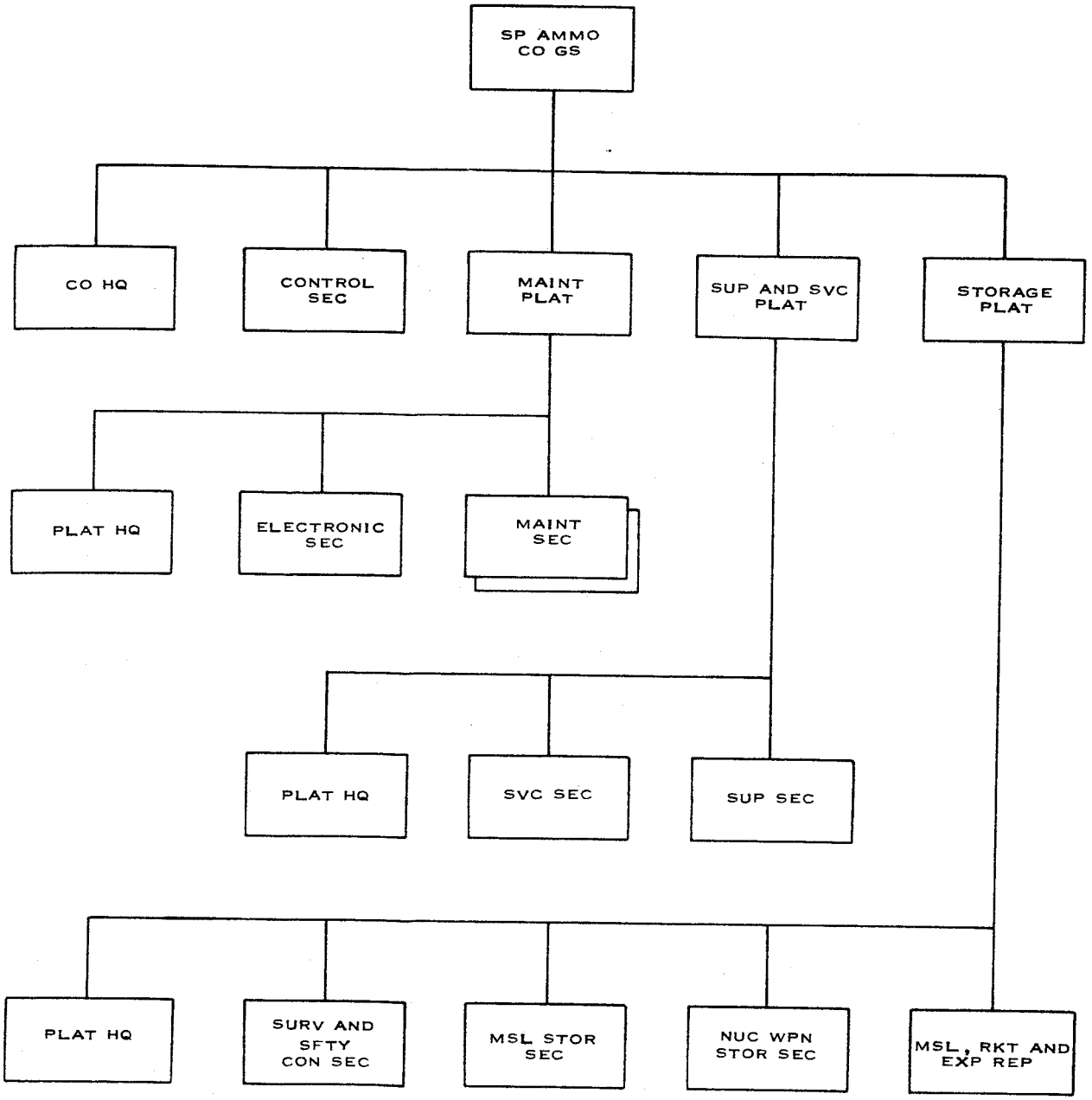


Figure 2–4. Ordnance special ammunition company, general support/direct support.

(3) The maintenance platoon provides for the inspection, repair, assembly and disassembly, testing, and modification of nuclear weapons, components, training material, and associated test and handling equipment.

(4) The storage platoon provides for the receipt, storage, and issue of complete rounds of special ammunition. Its personnel evacuate, demilitarize, salvage, or assist in the destruction of unrepairable missiles, rockets, and other special ammunition materiel. The platoon also provides ammunition surveillance personnel whose functions include the technical surveillance of nuclear ammunition during movement between supply installations.

(5) The supply and service platoon provides for the receipt, storage, and issue of repair parts, expendables, and inert components of mission stocks. It provides general support supply of authorized items to forward special ammunition supply units, direct support supply to authorized firing units on an area basis, and organizational

supply to support the disassembly, assembly, modification, test, and maintenance operations within the company.

b. Mission and Capabilities.

(1) The mission of the company is to:

(*a*) Provide special ammunition general support to special ammunition direct support units and special ammunition direct support to firing organizations as required.

(*b*) Provide complete round direct and general support supply for low-density missiles, nuclear warheads, large rockets (nuclear warheads), nuclear projectiles, and atomic demolition munitions.

(*c*) Provide direct and general support maintenance for special ammunition and associated test and handling equipment. This mission includes maintenance calibration and repair, disassembly/assembly, test, and modification of nuclear weapons, components, and training materiel.

(*d*) Provide for the evacuation of repairable missile-peculiar electronic and mechanical assemblies and components. Evacuation may be to a guided missile maintenance organization or to designated facilities in CONUS.

(*e*) Provide for the evacuation, demilitarization, salvage, or destruction of unrepairable missiles, large rockets, and other special ammunition materiel.

(*f*) Provide for the technical surveillance of nuclear ammunition during movement between supply installations, using specially trained ammunition surveillance personnel.

(2) The company, at full strength, is capable of operating 24 hours a day. Assigned personnel and equipment can be moved in one lift (100 percent mobility), but additional transportation must be provided to move special ammunition stocks when the company displaces. The company is dependent upon a field service general support company for CBR decontamination services. It does not have the capability to maintain missile-peculiar electronic, mechanical, and test equipment; and such materiel must be evacuated to designated guided missile maintenance organizations.

c. Assignment and Allocation. The company may be assigned to the TASCOM (through the Supply and Maintenance Command), FASCOM, or independent corps. Normal attachment is to the headquarters and headquarters company, ammunition battalion (TOE 9–36). The company is allocated to the field army on the basis of one for each corps. It is allocated to the COMMZ as required, normally on the basis of six companies in support of a three corps field army.

d. Method of Operation.

(1) Companies in the field army operate in support of the special ammunition direct support units and the SASP's they establish in each corps area. Companies in the COMMZ operate in support of the DS companies in the field army area and provide direct support supply and maintenance, as well as technical assistance, to air defense and field artillery missile units in assigned areas of responsibility. They also absorb overflow nuclear weapons maintenance workloads from the DS companies in the field army area. All direct support actions are normally made on a supply point distribution basis; however, unit distribution is used in emergencies when transportation and security personnel are provided. Army or COMMZ transportation may be used for shipments from COMMZ. Aircraft will be used, to the extent practicable, to reduce time in transit and requirements for physical security.

(2) Communications requirements are met by the provision of wire, radio, and radio teletypewriter equipment. The wire communications are used for internal command and control and to communicate with higher headquarters and adjacent units. Radio equipment is used for emergency communications. Radio teletypewriters, including encryption and decryption devices, are used by the company to submit classified reports to the ammunition battalion and for communication with the appropriate SALE (Special Ammunition Logistics Element).

(3) Security for special ammunition stocks is provided by the military police physical security company attached to the ammunition battalion. That company also provides the radio communications required for the physical security of the special ammunition stocks.

(4) The control section, in performing its typically assigned functions, insures a smooth working relationship among the operating elements of the company. It develops and coordinates the unit's standing operating procedures (SOP's). It controls the ordering, receipt, recording, maintenance, and distribution of classified documents. It performs stock accounting for mission material on hand. In so doing, it submits scheduled and special reports to higher headquarters on the quantity, allocation, and condition of stocks; maintains data on limited shelf life items contained in assigned material; maintains location

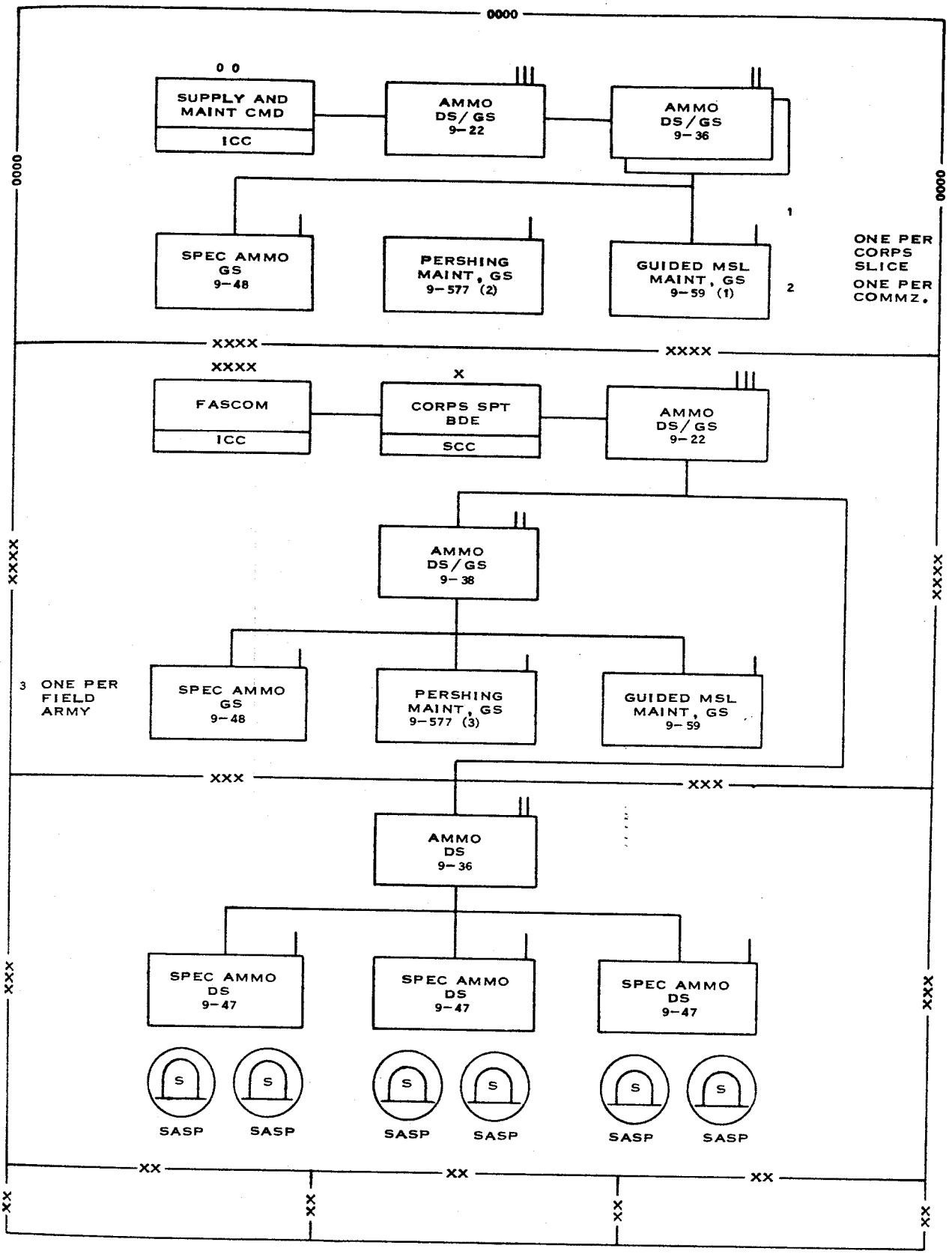


Figure 2-5. A type theater special ammunition logistical system (one corps slice).

records; and reports or requests dispositions of unserviceable material.

(5) The maintenance platoon, in accomplishing its functions, performs inspection, repair, disassembly/assembly, test, and modification of nuclear weapons, components, training material, and associated test and handling equipment. These functions include the disassembly, inspection, and testing of assembled weapons and the replacement of defective components. Platoon responsibilities exclude repair of missile-related electronic, mechanical, and test equipment which are the responsibility of guided missile maintenance organizations.

(6) The storage platoon, in performing its functions—

(*a*) Receives, stores, and issues missile and rocket motors, nuclear artillery projectiles, nonnuclear warheads, and explosive components of missiles.

(*b*) Receives, stores, and issues war reserve nuclear weapons and nuclear components.

(*c*) Maintains and repairs missile and rocket explosive components and rocket bodies.

(*d*) Provides personnel and equipment for ammunition surveillance, destruction, and safety of unit stocks.

2–6. Logistical Concept

Figure 2–5 depicts a type theater special ammunition logistical system.

CHAPTER 3

REQUIREMENTS AND STOCKAGE LEVELS

3–1. Requirements

Theater stockage requirements for special ammunition cannot be computed on a daily required rate as can requirements for conventional ammunition. Instead, requirements are dependent on a series of variables whose values may only be estimated. Theater stockage requirements for special ammunition are determined at theater level and are based on such factors as allocations by Department of the Army, threat analysis, special ammunition storage and maintenance capability and delivery unit availability.

3–2. Stockage Levels

The basic load and day of supply distribution system which applies to conventional ammunition does not apply to special ammunition. Distribution of theater stocks of special ammunition within the theater is based on allocations to commanders at the various tactical echelons. Commanders prescribe the distribution of available items within their command to include stockage at using units and special ammunition storage units.

a. Organizational Stockage. Special ammunition load (SAL) requirements at the using units are a function of firing doctrine. The establishment and replenishment of this load is a command decision and is based on the mission of the unit, the tactical and logistical situation and the capability of the unit to manage the load. The ratio of special ammunition to conventional ammunition carried by a unit may vary with the intensity of conflict.

b. Direct Support. Quantity of special ammunition to be stocked in an ammunition service support unit is a command decision based on the tactical and logistical situation and the capability of the unit. Quantity and composition of the stocks will vary with the intensity of conflict and tactical requirements. In a mid-intensity conflict, the ratio of selected ammunition and conventional missile warheads to nuclear and chemical may be higher than in a high-intensity conflict. In determining the number of direct support special ammunition companies required to support the TASTA–70 doctrine, the stockage requirements were calculated as functions of the special ammunition loads of the using units supported based on the various force models.

c. General Support. Requirements for general support stocks of special ammunition will depend on the availability of transportation for responsive resupply of the combat zone from COMMZ depots. It is assumed that in the 1970–1975 time frame adequate air transportation will be available. Therefore, requirements for stockage at general support level will be limited to emergency reserve levels only plus quantities required to provide direct support on an area basis. Stocks maintained at general support should be selective by type to provide support for the more critical items.

d. Depot Support. The theater reserve stocks of special ammunition will be retained in the COMMZ depots with the majority stored in the rear depots.

CHAPTER 4

SPECIAL AMMUNITION SUPPLY SYSTEM

4–1. General

The basic load and automatic resupply system which applies to conventional ammunition does not apply to special ammunition. Special ammunition service in the field is based on special ammunition stockages, special ammunition loads, and allocation system. (See paragraph 1–4 for definitions of these terms.) Allocations of special ammunition are made to commanders by specific item and for either a specific length of time or action. Commanders prescribe the distribution of available weapons, yields, and total numbers. Stockage of class IX items peculiar to special ammunition are governed by the principles of the Army field stock control system (AR 711–16). The supply flow of special ammunition and related class IX items is illustrated in figures 4–1 and 4–2.

The normal methods of providing supply support are as follows:

a. Supply flow of special ammunition is from COMMZ depots to special ammunition direct support companies that operate the SASP's and issue to using units. Special ammunition general support companies provide backup support to the special ammunition direct support companies.

b. The flow of missile peculiar (less warhead) class IX items related to special ammunition is from an aircraft and missile repair parts company directly to the missile direct support and general support units. General support companies stock only those class IX items required to support their organic shops. Direct support units supply authorized repair parts to the missile firing units and to organic shops.

4–2. Planning

Upon the receipt of a materiel release order, shipping instructions, or other authority directing a shipment, an ammunition service installation should plan the mechanics of the specific shipments. Important factors to be considered are as follows:

a. Verification of the availability or nonavailability of items on the shipment. Quantities not available should be immediately reported to the source issuing the shipping order or shipping instructions.

b. Selection of the lots and/or serially numbered items and storage locations from which specific quantities are to be loaded for the shipment.

c. Computation of the amount of available labor which can be used for the loading of motor transport carriers in the storage area and for loading of transport carriers at the transfer point if the shipment is made by rail, air, or water.

d. Selection and alerting of supervisory personnel required to conduct loading, checking, inspection, and accounting functions inherent to the movement procedures.

e. Placement of requirements upon the transportation movements office serving the installation for the required amount of transport.

f. Amount and types of materials handling equipment required to effectively load and move packages and containers.

g. Safety equipment, tools, materials, and supplies required to brace, store, palletize, transport, and secure items of the shipment during transit.

h. Security and communications required during loading, transporting, and movement of the shipment.

i. Liaison with the transportation service regarding technical assistance, time of arrival, and spotting of transport carriers.

j. Estimation of the downtime involved in accomplishing the loading, transporting, bracing, inspection, accounting, documentation, and release of carrier units to the transportation service, based upon actual amounts of labor, supervisory personnel, equipment, materials, and transportation available to perform these functions. Downtime is the time interval between the arrival of empty (or loaded) transport carriers at a class V

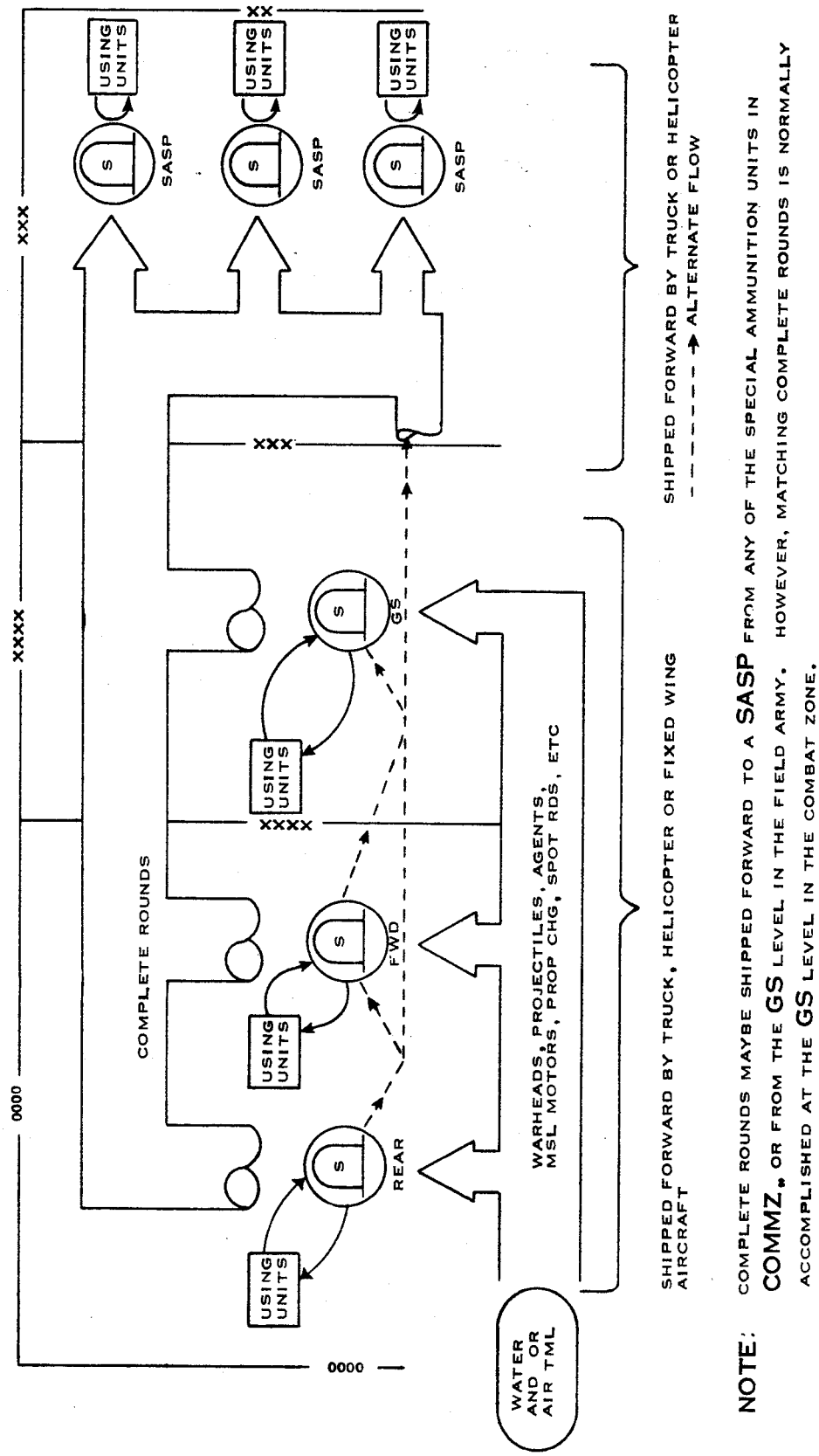


Figure 4–1. Flow of special ammunition.

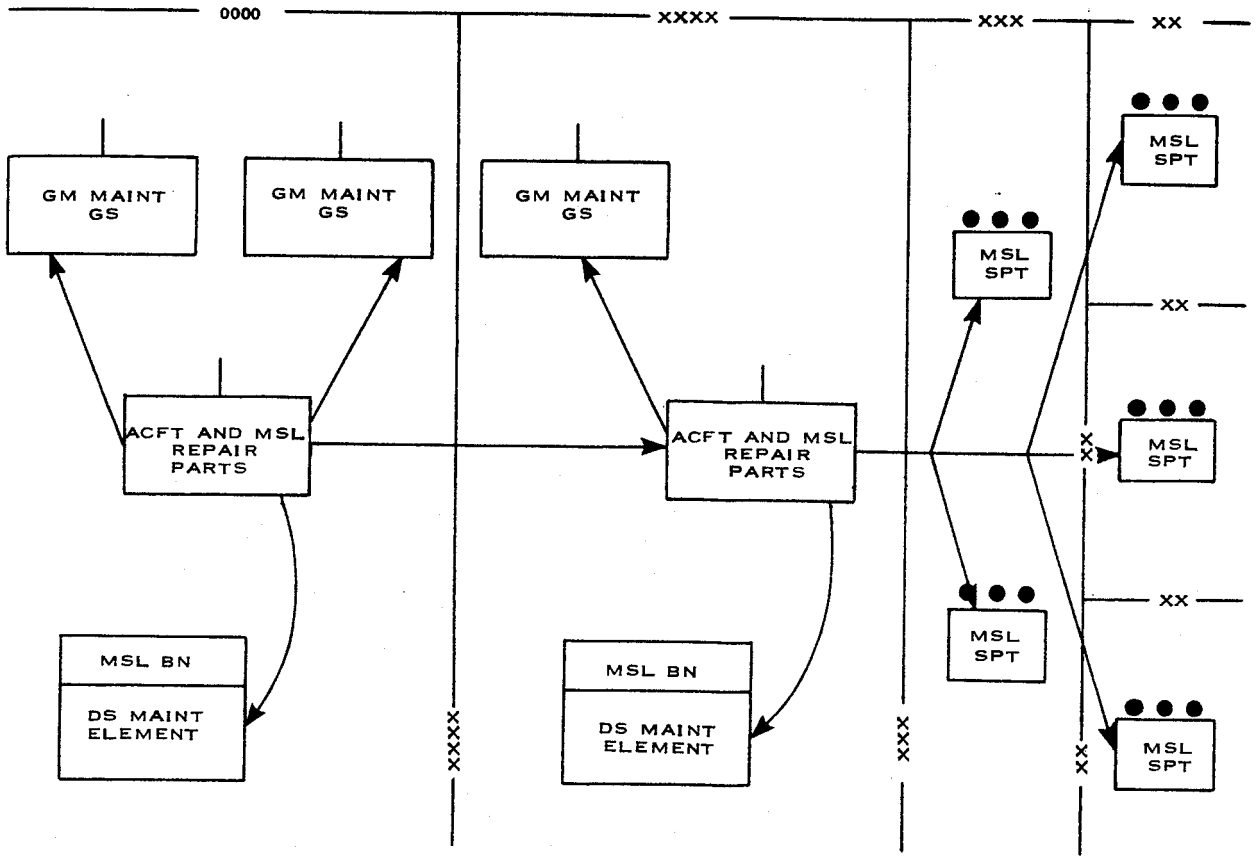


Figure 4–2. Flow of missile peculiar class IX items related to special ammunition.

storage installation and the departure of these transport vehicles, loaded (or empty). It begins with the reporting of the convoy or train commander at the supply installation office and terminates when the last vehicle of a train clears the assembly area checkpoint.

4–3. Receipt of Special Ammunition

a. Planning for Receipts. Special Ammunition companies normally will receive notice of incoming shipments by an advance REPSHIP (IAW AR 55–203) and/or alert orders, shipment status card (DD Form 1348M), or by an advance information copy of DD Form 1348–1, (DOD single line item release/receipt document). This information will include time and date of arrival, type and quantity of materiel in the shipment, and method of transport used. Upon receipt of this advance notice, the operations officer will immediately alert key operating, security and communications personnel, and a storage location will be designated. Special ammunition materiel received by air or rail will require security personnel, handlers, and materials handling equipment at the railhead or air terminal for transferral of materiel. Organic transportation and security are sufficient for movement only when the railhead or air terminals are adjacent to the special ammunition company. Vehicles from COMMZ transportation and/or Army's transportation brigade and security furnished by the area commander will be required in other cases.

b. Receipt by the Storage Unit. Incoming vehicles are normally held in a vehicle holding area while the shipment is given a security and safety inspection. A designated individual must identify the courier and then release the courier from responsibility for the shipment by signing the courier receipt. Consignee must check all serial numbers prior to receipt of items from courier *if* serial numbers are indicated on courier receipt. The documents envelope will then be opened and the storage location noted on the stores slips. In the storage area, the checker must compare the quantities and serial numbers (when applicable) of each item on the vehicle with the documents accompanying the shipment. Upon verification of the serial numbers and quantities involved, the materiel is unloaded and placed in the selected storage location. The checker enters the storage

location data on the storage section work copy of the shipping documents and sends them to the operations section for posting to the control records and for sending notification of receipt to the ICC/SCC. Signed copies of the DD Form 1348–1, must be returned to the consignor. Upon receipt of nuclear components, a qualified inspector should be on hand to make a visual inspection of the nuclear component containers to determine if the materiel has been damaged or subjected to rough handling in transit.

c. Receiving Special Ammunition from Supported Units. Considerable quantities of materiel will be received by special ammunition companies from supported units. This materiel will fall into five classes.

(1) *Materiel Received for Periodic Maintenance.* Such materiel is normally serviceable but requires maintenance prior to re-issue. Storage for such items should be planned to facilitate their subsequent delivery to the maintenance area. The greatest amount of returned materiel will fall in this category in peacetime or periods of prolonged non-nuclear combat.

(2) *Materiel Received Through Evacuation Channels.* Such items will be rigidly inspected to determine condition and stored pending repair or disposition.

(3) *Salvage.* DA Form 581 (Request for issue and turn-in of ammunition) will be used for turn-in of serviceable packaging material which is residue of a firing mission. In the event of an expenditure, unused nuclear components, nuclear containers, or other nuclear weapons residue (materiel, including weapons logbook, as appropriate, and inspection record cards) will accompany the turn-in. All copies of DA Form 581 will clearly be marked "turn-in." The method of preparation, number of copies, and distribution of copies will be in accordance with local policy.

(4) *Materiel Being Repositioned.* In accordance with command direction, items of special ammunition may be returned for storage or re-issue.

(5) *Captured Enemy Ammunition Items.* Captured ammunition will be turned into any ammunition unit which normally issues ammunition. Military Intelligence Personnel should be advised of the arrival of all captured items.

4–4. Issues from SASP's

Upon arrival at a SASP, the train commander or the representative of the firing unit presents an authenticated supply document (DA Form 581 or 2765) to the supply point operations office in the number of copies required. Prepared supply documents are in accordance with AR 711–16 and AR 735–35. The supply point office should identify the unit representative, verify the availability and the authority of the receiving unit to draw the items requested, and indicate the storage locations from which the issue will be made. Extreme care should be exercised to insure that unauthorized personnel or personnel without the proper security clearance cannot, and do not, enter restricted areas. Dependent upon local conditions, additional security personnel may be required to accompany vehicles to and from security storage areas. As each vehicle is loaded, it is escorted to the vehicle assembly area. At this point, the train commander or the firing unit representative may verify the items issued. One copy of the signed and completed supply document should be used to post control cards. A report of the issue will be transmitted to the appropriate ICC/SCC.

4–5. Surveillance Program

A surveillance program as outlined in AR 700–86 is necessary at any installation or activity handling ammunition. It is necessary to insure that all items are in a serviceable condition and ready for issue; and that items which are not serviceable will be repaired, salvaged, destroyed, or evacuated as required. The program should outline procedures and practices concerned with the prevention of ammunition deterioration and the promotion of safe ammunition handling practices (TM 39–20–12, TM 9–1300–206, and SB 742–1).

CHAPTER 5

CONTROL PROCEDURES

5–1. General

The purpose of this chapter is to discuss and clarify the means or reporting and control of special ammunition within a theater of operations.

5–2. Orientation to Terms

The following terms are used frequently within this section:

a. Special ammunition allocation. The apportionment of specific quantities and types of special ammunition is made to a commander for a stated period as a planning factor for use in the development of his war plans. The allocation to a commander may include special ammunition for delivery by units not under his command such as the supporting Air Force or higher echelon artillery. Within a theater of operations, allocations are made by the theater commander from theater special ammunition assets to the field army commander. Actual dispersal of allocated special ammunition to a field army commander from theater assets will be accomplished only when espressly directed by the theater commander in support of his war plans. (See Allocation, Nuclear, appendix B)

b. Special ammunition load (SAL). The specific quantity of special ammunition to be carried by a delivery unit. The establishment of a new load level after each expenditure is a command decision and is dependent upon the mission, the tactical and logistical situation, and the capability of this unit to transport and utilize the load. It may vary from day to day and among similar delivery units. A sample special ammunition load is shown in figure 5–1. Although only nuclear examples are shown other types of special ammunition are carried on a SAL.

1ST CORPS AND DIVISIONAL UNITS

	TOTAL	8/683 (8")	4/681 (8")	5/671 (8")	2 INF DIV (8")	6/682 (8")	3/671 (8")	12/673 (HAWK)	6/656 (HAWK)	5/655 (HAWK)	10/657 (HAWK)	15/677 (HAWK)	13/674 (HAWK)	10 ARMD DIV (HJ)	1 INF DIV (HJ)	21 MECH DIV (HJ)	2/106 (HJ)	4/106 (HJ)	1/213 (SGT)
8" ALFA	3	1	1	1															
8" BRAVO	3				1	1	1												
HJ ECHO	4													1	1			2	
HJ FOXTROT	5														1	2	2		
SGT FOXTROT	2																		2
SGT GOLF	4																		4
SGT HOTEL	4																		4
HJ ROCKET	9													1	2	2	2	2	
HAWK	300							50	50	50	50	50	50						
SERGEANT MSL	10																		10

Figure 5–1. Special ammunition load (Sample).

SPECIAL AMMUNITION	TOTAL THEATER	THEATER STOCKS: DEPOT 909	DEPOT 910	SASP 911	SASP 912	SASP 913	DEPOT 906	DEPOT 908	DEPOT 901	DEPOT 902	SASP 947	SASP 948	SASP 949	SASP 950	SASP 951	SASP 952	AIR DEF CMD STOCKS: DEPOT 909	DEPOT 910	SASP 911	SASP 912	SASP 913	DEPOT 906	DEPOT 908	DEPOT 901	DEPOT 902	POSITION AS DESIRED	ARMY STOCKS: POSITION AS DESIRED			TOTAL THEATER
8" BRAVO	14	1		1			1					1															10			14
8" CHARLIE	23	2	5		1										1												14			23
HJ DELTA	14		3			2				2		1															6			14
HJ ECHO	17	2	1					3					2														9			17
HJ FOXTROT	11	1							1						1												8			11
NH DELTA	29			2		1	1	1	2								2	1			3			1	2	5	8			29
NH ECHO	20				3		1			1							1			1			1			8	4			20
ADM ALPHA	6	1								2																	3			6
ADM ECHO	4	1	1						1																		1			4
																											18			39
HJ CONV	39	8	5	1			3	2		2																	6			40
NH CONV	40	3	2	1			1	4	2								2									14				
HAWK	120	12	8		1		2	1			7			5				4	2		1	6				61	10			120
MISSILE BODY AND ROCKETS																														
HJ RKT	94	18	15	1	2		3	5	1	4		1	2		1			3	1	3	3		1	3	2	27	41			94
NH MSL BODY	96	5	7	3	3	1	3	5	4	1								3	1	3	3	6				61	18			96
HAWK	120	12	8		1		2	1						5				4	2		1						10			120

Figure 5-2. Special ammunition stockage (Sample).

c. Special ammunition stockage. The specific quantity of various special ammunition items to be stocked in an ammunition service support unit or installation. The establishment and replenishment of this stockage is a command decision and is dependent upon the tactical situation, the logistical situation, and the capability of the units concerned to perform the special functions required by this ammunition while it is in the unit's custody. A sample of special ammunition stockage is shown in figure 5–2.

d. Status board. A chart that may be used to aid in reporting and control of special ammunition.

e. Status cards. A series of cards that may be used as an aid in the reporting and control of special ammunition.

f. Status reports. Periodic reports submitted through channels reflecting the status of each item of special ammunition for which a unit maintains responsibility.

5–3. Special Ammunition Stock Status Card (DA Form 3649R) (Fig 5–3)

DA Form 3021-R may be reproduced locally on 8″ x 10½″ paper. To be used by an activity responsible for reporting and control of special ammunition to maintain accurate accountability.

a. In order to assure an understanding of the terms used in conjunction with the status cards, the following definitions will apply:

(1) *Code.* For nuclear weapons and nuclear weapons components, this will be the line number listed in JCS Pub 6, Vol II. Other items of Special Ammunition will use DODAC (Dept of Defense Ammunition Code), or AMC type designator if DODAC is not applicable.

(2) *Item.* Identification of type of material, e.g.: AK, WHS, RKT, MTR, etc.

(3) *Unit.* Specific location code listed in TP 5–4A and TP 5–4B which identify the specific location of the reportable items.

(4) *Date-time group.* Date and time of occurrence of transaction.

(5) *Voucher number.* Identification of document effecting transaction. If no voucher number is available (such as in destroyed ammunition), enter the OCR (Operational Change Report) number reporting the transaction or the number of the appropriate entry in the activities daily staff journal.

(6) *Initial stockage.* The number of items an activity had in their physical possession at the start of a particular operation or at activation of the particular site. This figure will remain constant for the operation or until otherwise directed by higher headquarters.

(7) *Due in.* Those items scheduled to arrive in an activity. This is not a cumulative number, but will reflect the number of items due in at the time of the entry.

(8) *Received.* Those items that are received in an activity. This number will be cumulative.

(9) *Turned in Serviceable.* An entry in this column will add to the serviceable column. This number will be cumulative.

(10) *Due out.* Those items scheduled for issue or transfer to another activity. Items are removed from this status when placed in transit. This is not a cumulative number, but will reflect the number of items due out at the time of the entry.

(11) *Lost.* Items lost due to enemy action or accidentally or intentionally destroyed. This number is cumulative.

(12) *Expended.* The number of rounds fired. This column is included on the card so that it may be adopted for use by firing units or be used in a theater where there is a requirement for expenditures to be reported by the supporting SASP for the firing unit. This number is cumulative.

(13) *Issued.* The number of items issued by a supply installation. This number will be cumulative.

(14) *Evacuated unserviceable.* An entry in this column will subtract from the unserviceable column. This number will be cumulative.

(15) *Unserviceable.* The number of items that are in an unserviceable condition. This is not a cumulative number, but will reflect the number of items unserviceable at the time of the entry. The turn-in or evacuation of an unserviceable item poses special problems in keeping the status cards accurate. Accordingly the following rules apply:

(*a*) *Turn-in.* Enter the item as a received item and as an unserviceable item.

(*b*) *Evacuation.* Enter the item as evacuated unserviceable and subtract it from the unserviceable column.

(*c*) *Repair.* Enter this item in the serviceable column and delete it from the unserviceable column.

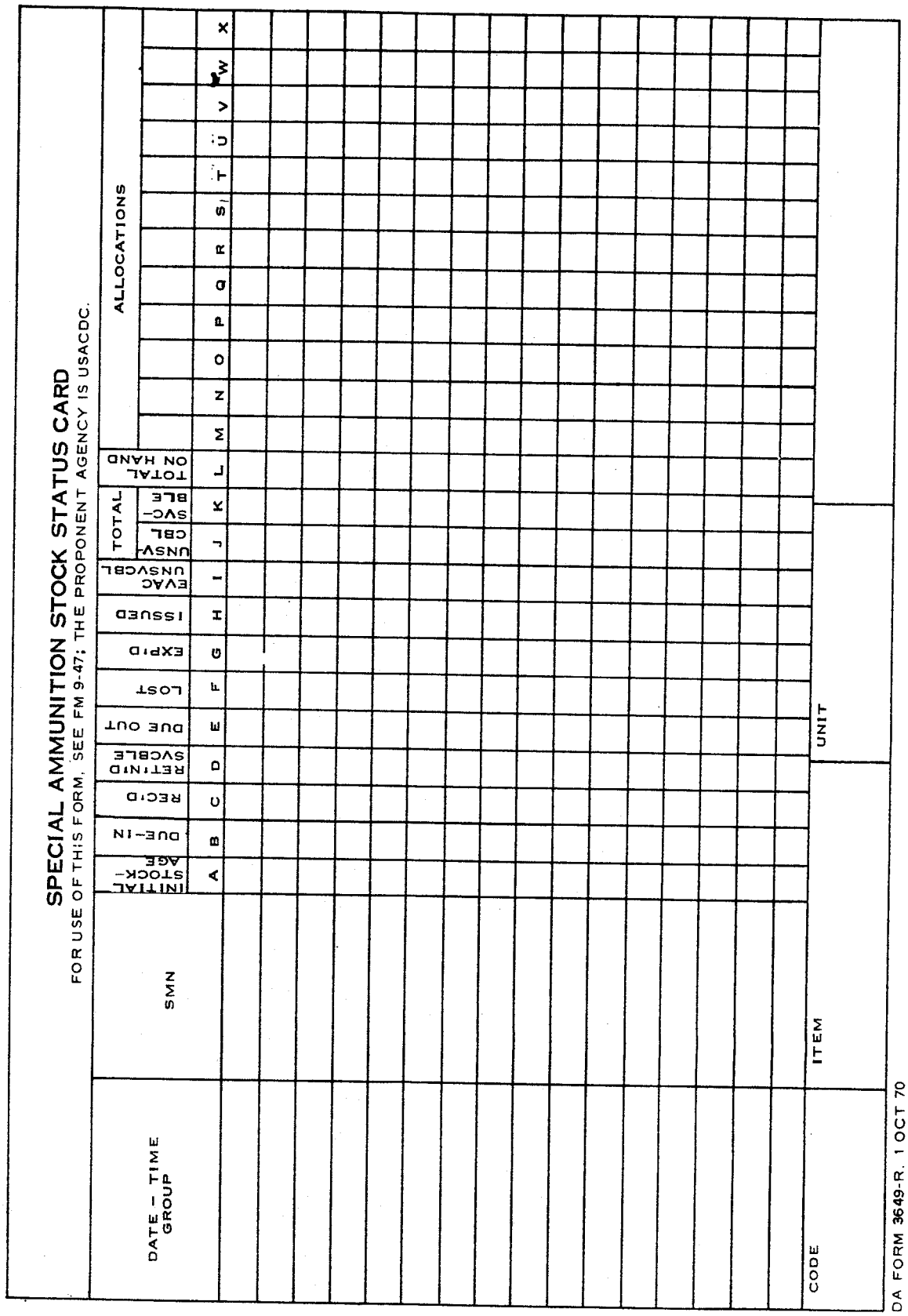


Figure 5–3. Status card.

(16) *Serviceable.* The number of items that are in a serviceable condition. This is not a cumulative number, but will reflect the number of items serviceable at the time of the entry.

(17) *Total on hand.* This column indicates the total number of items for which a unit is responsible. This number will vary as items are received, issued, or lost.

b. On the right-hand side of the card, columns have been provided so that allocation information may be maintained. The columns would be labeled so as to show the allocations of every control headquarters which the supply installation supports.

c. To assist in verifying the accuracy of the status cards, the following rules will apply:

(1) Initial Stockage + received + turned in serviceable — lost — issued — evacuated unserviceable = total on hand.

(2) Unserviceable + serviceable = total on hand.

(3) The sum of the allocation columns = total on hand.

5–4. Status Boards

Figure 5–4 is a sample stock status board which may be used to brief commanders and staffs on the status of special ammunition. The data used in posting the status board is abstracted from the status cards. Status boards should be modified to meet the needs of the local unit operations. The terms used in conjunction with the status cards will apply to the status boards. The sample stock status board shown is one that would be used by a Corps SALE.

5–5. Ammunition Stock Status Reporting

a. Field Army.

(1) *Ammunition record procedures.* The general support special ammunition company, and each SASP will maintain required ammunition records for all special ammunition stored and that which is on hand in supported units. These records contain such information as nomenclature, serial numbers, maintenance due dates, component expiration dates, and retrofit orders performed. Reports containing this information, to include changes as they occur, are normally furnished the ammunition battalion headquarters having command and control over the supply points, the support group headquarters, CSB SCC and FASCOM ICC. In turn the CBS SCC and FASCOM ICC provide this information to their SALE. These reports present a communications problem since they are normally classified SECRET RESTRICTED DATA or SECRET FORMERLY RESTRICTED DATA. Therefore,

CLASSIFICATION

STOCK STATUS AS OF _____

ITEM	CODE	* SAD 900						* SASP 901						* SASP 902						* SASP 903					
		INITIAL STOCKAGE	REC'D	ON HAND SVC	ON HAND UNSVC	LOST	ISSUED	INITIAL STOCKAGE	REC'D	ON HAND SVC	ON HAND UNSVC	LOST	ISSUED	INITIAL STOCKAGE	REC'D	ON HAND SVC	ON HAND UNSVC	LOST	ISSUED	INITIAL STOCKAGE	REC'D	ON HAND SVC	ON HAND UNSVC	LOST	ISSUED
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X

*UNITS SHOULD BE CHANGED ACCORDING TO SUPPORT REQUIREMENTS.

METHOD FOR BALANCING THIS STATUS BOARD IS AS FOLLOWS:

A+B = C+D+E+F
G+H = I+J+K+L
M+N = O+P+Q+R
S+T = U+V+W+X

CLASSIFICATION

Figure 5–4. Sample stock status board.

hard copy reports will usually be delivered by courier and changes via manual coded telephonic message. Unlike status reporting which requires immediate posting, this report will be an after-the-fact operation.

(2) *Special ammunition status reports.* Through the use of input/output devices and appropriate cryptographic equipment, each DS special ammunition company and each SASP, provides the CSB SCC with continuous transaction data on receipts, issues, changes in condition, and destroyed items. As required, these units will also submit a 100 percent status of stocks to the CSB SCC. The CSB SCC provides its SALE and the FASCOM ICC these status reports. The FASCOM ICC in turn furnishes status reports to its SALE and the Supply and Maintenance Command ICC.

(3) *Managerial data.* The CSB ICC provides the support group headquarters selected information on special ammunition to include instructions for managerial purposes. In turn, the group furnishes the same to its subordinate battalions, and battalions to operating companies.

(4) *Inventory control of special ammunition.* After-the-fact information in regards to receipts, issues, inventories and condition changes are provided the FASCOM ICC by the CSB SCC. The Field Army SALE keeps the FASCOM ICC apprised of the special ammunition situation from the tactical point of view, furnishing expenditure reports and other information deemed appropriate. The Chief of the Missile and Munitions Division, FASCOM ICC, who is the ammunition commodity manager for the field army, accomplishes the interface with the Supply and Maintenance Command ICC for special ammunition. As with conventional ammunition, the FASCOM ICC furnishes Supply and Maintenance Command ICC a status of special ammunition stocks to include release orders, and requests for disposition on special ammunition beyond the repair capability of the field army. In turn, Supply and Maintenance Command ICC provides the FASCOM ICC with notice of shipments, disposition instructions on unserviceable special ammunition and other information as appropriate.

(5) *Stock control of special ammunition.* After-the-fact information such as receipts, issues, inventories, and condition changes are provided the CSB SCC by special ammunition supply points of a corps slice. The corps SALE keeps the CSB SCC up to date on the special ammunition situation from the tactical point of view, furnishing reports and other information as deemed appropriate. Continuous coordination is maintained between the corps and SALEs. In addition, the CSB SCC keeps the FASCOM ICC up to date on special ammunition transactions for the corps slice. In turn, the FASCOM ICC relays to the CSB SCC information on notice of shipments from COMMZ and evacuation instructions for unserviceable ammunition as overflow maintenance to COMMZ.

b. COMMZ.

(1) *Stock record procedures.* The general support special ammunition company will maintain required stock records for all special ammunition stored in the special ammunition depot that it operates. It will also maintain records of special ammunition in hands of using units supported in its direct role. These records contain such information as nomenclature, serial numbers, maintenance due dates, components expiration dates, and retrofit orders performed. Reports containing this information to include changes as they occur are normally furnished the ammunition battalion headquarters of the particular ammunition depot complex, the ammunition group headquarters, and Supply and Maintenance Command ICC. In turn Supply and Maintenance Command ICC provides this information to the SALE. These reports present a communications problem since they are normally classified SECRET RESTRICTED DATA or SECRET FORMERLY RESTRICTED DATA. Therefore, hard copy reports will normally be delivered by courier and changes via manual coded telephonic message. Unlike status reporting which requires immediate posting, this report will be an after-the-fact operation.

(2) *Special ammunition status reports.* Through the use of its input/output device, the special ammunition general support company provides continuous transaction data on receipts, issues, change in condition, damaged or destroyed to the Supply and Maintenance Command ICC. The special ammunition depots also provide, on an as required basis, a 100 percent status of stocks to the Supply and Maintenance Command ICC. The COMMZ SALE organic to the Supply and Maintenance Command ICC, is provided status reports.

(3) *Managerial information.* The Supply and Maintenance Command ICC provides the ammunition group headquarters selected information on special ammunition to include instructions for managerial purposes. In turn the group furnishes managerial data to include instructions to its subordinate ammunition battalions. The battalions do the same for their operating companies.

(4) *Inventory control of special ammunition.* After-the-fact information in records to receipts,

issues, inventories and condition changes are provided the Supply and Maintenance Command ICC by the special ammunition depots. The COMMZ Sale keeps the Supply and Maintenance Command ICC appraised of the special ammunition situation from the tactical point of view, providing reports and other information deemed appropriate. The Chief of the weapons and munitions branch, Supply and Maintenance Command ICC, who is the ammunition commodity manager for the theater, accomplishes the interface with the CONUS ammunition commodity manager for special ammunition. As with conventional ammunition, the Supply and Maintenance Command ICC furnishes a status of special ammunition stocks to include requisitions, and requests for disposition on special ammunition beyond the repair capability of the theater. In turn, CONUS provides the Supply and Maintenance Command ICC with notice of shipments, disposition instructions on special ammunition, and other information as may be required.

5–6. Special Ammunition Stock Control and Accounting Procedures

a. Where possible, consolidation, standardization, and simplification of procedures for supply and stock control of special ammunition should be accomplished.

b. The forms indicated below will be utilized to establish and maintain an effective stock control and accounting system.

SPECIAL AMMUNITION CONTROL RECORD

ABBR NOMEN	SERIAL NO	LOT NO	MK–MOD–ALT	SHELF LIFE DATA	LOCATION	AC CODE

ASSOCIATED EQUIPMENT:

FSN AND OR SERIAL NO	NOMENCLATURE

DA FORM 3021–R
1 JUL 65

Figure 5–5. The special ammunition control record.

(1) *Due-in and Due-out records.* When due-in and due-out records are required they will be maintained in acordance with AR 711–16.

(2) *Special Ammunition Control Record* (DA Form 3021–R) (fig 5–5).

(*a*) DA Form 3021–R may be reproduced locally on 8" x 8½" paper. It is used by each special ammunition company as the control record for assembled weapons and major components. It provides a single source of information for recording stockpile information in accordance with JCS Pub 6, Vol II. Personnel using the form should insure that its security classification is indicated when filled out.

(*b*) DA Form 3021–R will be used to control the following:

1. DA Form 3021–R can be prepared for each major assembly (adaption kit, warhead section, or complete round) for which the company has responsibility. The serial number of the major assembly and the serial numbers of the components contained therein will be recorded.

2. DA Form 3021–R can also be used to list major components with the same FSN. These components will be listed by serial number.

(*c*) Entries on DA Form 3021–R will be by typewriter or printed in ink as follows:

1. FSN and/or Serial Number. As provided for by applicable TM 9– or TM 39– series manuals.

2. Nomenclature. As shown in applicable publications; includes MK-mod-alt.

3. Abbreviated nomenclature. AK, WHS, RKT, MTR, etc.

4. Serial number. Serial number of major assembly and/or major components.

5. Lot number. Lot number of items when applicable.

6. Shelf life data. As provided by Army Master Data File (AMDF), AR 700–1.

7. MK-mod-alt. When applicable, enter MK-mod-alt number opposite major assembly and/or major components.

8. Location. Depot, bin, site, or serial number of weapon in which item is located.

9. Ammunition condition code. Code as applicable to each item.

10. Associated equipment. List major assemblies associated with the end item; e.g., rocket motor and fin serial numbers. May also be utilized for remarks.

(3) *Color coding.*

(*a*) Color tabs can be used on records to identify logistical changes, ammunition serviceability, and maintenance scheduling as follows:

1. Red tabs—items not ready for issue.

2. Blue tabs—to denote items scheduled to receive a storage inspection during the current calendar year.

3. No tabs—ammunition ready for issue.

(*b*) As requirements arise, color codes may be designated to readily identify at a glance the status of special ammunition.

5–7. Stock Status Reports

The following is a brief discussion of stock status reports. Details concerning these reports are contained in JCS Pub 6, Vol II.

a. General.

(1) *Description of reports.* The reporting system consists of the following reports:

(*a*) *Operational Change Report* (*OCR*). A high precedence report, submitted as of 1200 local time by electrical means, reflecting any reportable transactions which have occurred in the preceding 24 hours.

(*b*) *Wartime/Exercise/Emergency Reporting* (*OCR-EMERG*). A report submitted as of 0400, 1200, and 2000 local time under wartime, exercise, or emergency conditions if reportable transactions have occurred since the previous report. A negative report will be submitted as of 1200 local. OCR-EMERG's will be submitted by peacetime transmission channels if available. If these channels are lost the most efficient means available will be used.

(*c*) *Semiannual Inventory Report* (*SIR*). A report submitted semiannually based upon a physical inventory, conducted to provide a reconciliation of records and a verification of the stockpile.

(2) *Classification of reports.* Each report will be classified in accordance with the Joint AEC/DOD Nuclear Weapons Classification Guide (CG–W–3), Special Weapons Overflight Guide (SWOG), and appropriate Army Regulations, normally not lower than SECRET FORMERLY RESTRICTED DATA or SECRET RESTRICTED DATA.

b. Operational Change Report (*OCR*).

(1) *Purpose.* The Operational Change Report (OCR) provides timely high precedence logistical and operational data regarding reportable items.

(2) *Scope.* The OCR 2C card (C is Change) reports weapon and major assembly, receipt, shipment, expenditure (prior to DEFCON 3) or loss, weapon code change, alt code change, charge code change, availability code change, and color code change. The OCR 2M card (M is maintenance data) reports component receipt, shipment, removal, installation, expenditure (prior to DEFCON 3), weapon code change, and color code change. Service Atomic Ordnance items (K items) will be reported on 2M cards for peacetime OCR's or as directed by respective services for OCR-EMERG's.

(3) *Submission.*

(*a*) During peacetime an OCR is prepared as of 1200 hours local time each day if one or more reportable changes have taken place during the preceding 24 hour period. This report consolidates all reportable transactions which occurred during the reporting period at the reporting location. It will be transmitted by AUTODIN or Teletype (TTY) no later than 2400 hours local time of the same day. If communications capability is lost, an OCR will be submitted upon reestablishment of communications, reporting all transactions since previous submission. PRIORITY precedence is assigned.

(*b*) During wartime or other specified times (See JCS Pub 6, Vol II) the OCR will be submitted three times daily with negative reports required. IMMEDIATE precedence is assigned.

(4) *Format.* The OCR is prepared in the prescribed Automatic Data Processing (ADP) punch card format and submitted using the Automatic Digital Network (AUTODIN) by those reporting units having access to a secure AUTODIN terminal. A teletype report (on line encryption) in tabular format may be used as the alternate method of submission by those units that do not have access to a secure AUTODIN but are in the Defense Communications System (DCS). Units not in the DCS and who must use off line encryption shall submit reports in a columnar format in accordance with JCS Pub 6, Vol II.

(5) *Preparation.* Local reproduction of creation sheets or work sheets is authorized to assist in the preparation of punch cards, and should contain columnar descriptions for punch cards. Sample creation sheets for the types of punch cards for the preparation of an OCR are shown in Figures 5–6, 5–7, 5–8, and 5–9. Sample creation sheets for the types of punch cards for the preparation of an OCR-EMERG are shown in Figures 5–10, 5–11, 5–12, and 5–13. (Note: figure 5–6 through 5–16 reflect only 70 card columns per creation sheet. OCR, OCR-EMERG, and SIR punch cards require only 69 card columns for data fill.) One 1C card and one 3C card or one 1W card and one 3W card will be prepared for each OCR or OCR-EMERG respectively.

c. Semiannual Inventory Report (SIR). (JCS Pub 6, Vol II)

(1) *Purpose.* The purpose of the Semiannual Inventory Report (SIR) is to reconcile Field Command, DASA, Centralized DOD records, Atomic Energy Commission (AEC), Service, and Unified and Specified Commanders records with sight inventory at each reporting location. The SIR also provides a record copy of inventories.

(2) *Scope.* The SIR reports an inventory of the same items reported on OCR's. SIR's are required to be submitted by all DOD reporting units having custody of war reserve (WR) nuclear weapons, or having custody of specified Service Atomic Ordnance items.

(3) *Submission.* A complete physical inventory shall be conducted, and a SIR submitted by reporting units even if no change has occurred since the previous SIR. The semiannual inventory shall be conducted as of 1200 hours local time on the last day of certain specified months, except as otherwise directed. Units required to submit SIR's will forward them by AUTODIN for those units having access to cleared AUTODIN facilities and by mail for all others. Submission is required not later than three working days following the "as of" date.

(4) *Format.* The SIR will be prepared in prescribed ADP punch card format and submitted using AUTODIN, or by submission of creation sheets or machine listing by authorized courier or registered air mail.

(5) *Preparation.* General instructions for preparation of OCR punch cards and creation sheets apply to preparation of SIR punch cards and creation sheets. Sample creation sheets for the types of punch cards required for preparation of a SIR are shown in Figures 5–8, 5–9, 5–10, 5–11, and 5–12. One 1S card, one 3N card and one 3S card will be prepared for each SIR from each reporting location.

5–8. Control of Special Ammunition

a. Tactical control. Tactical control of special ammunition is exercised through command channels. Allocations are passed from commanding

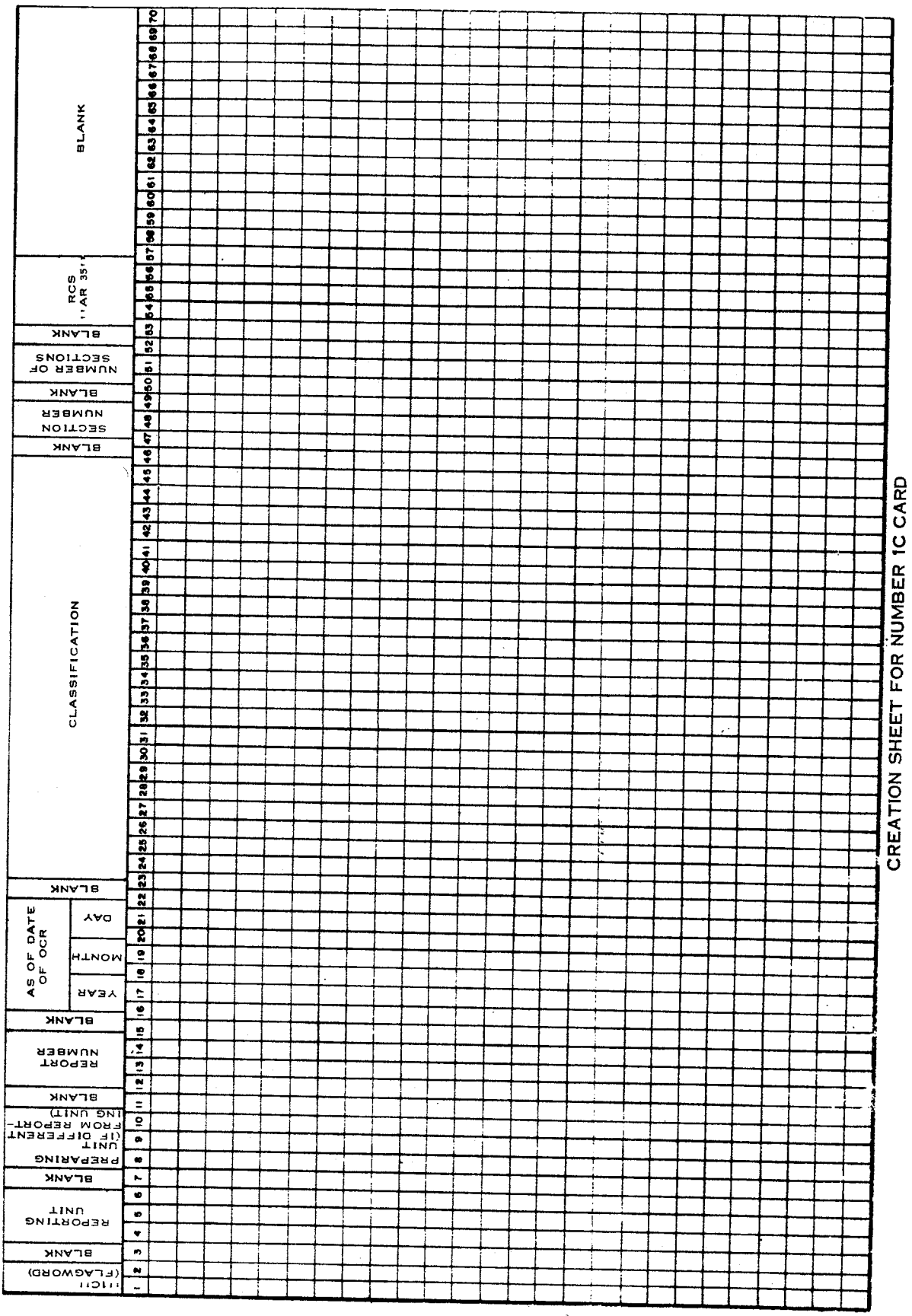


Figure 5–6. Creation sheet—1C card.

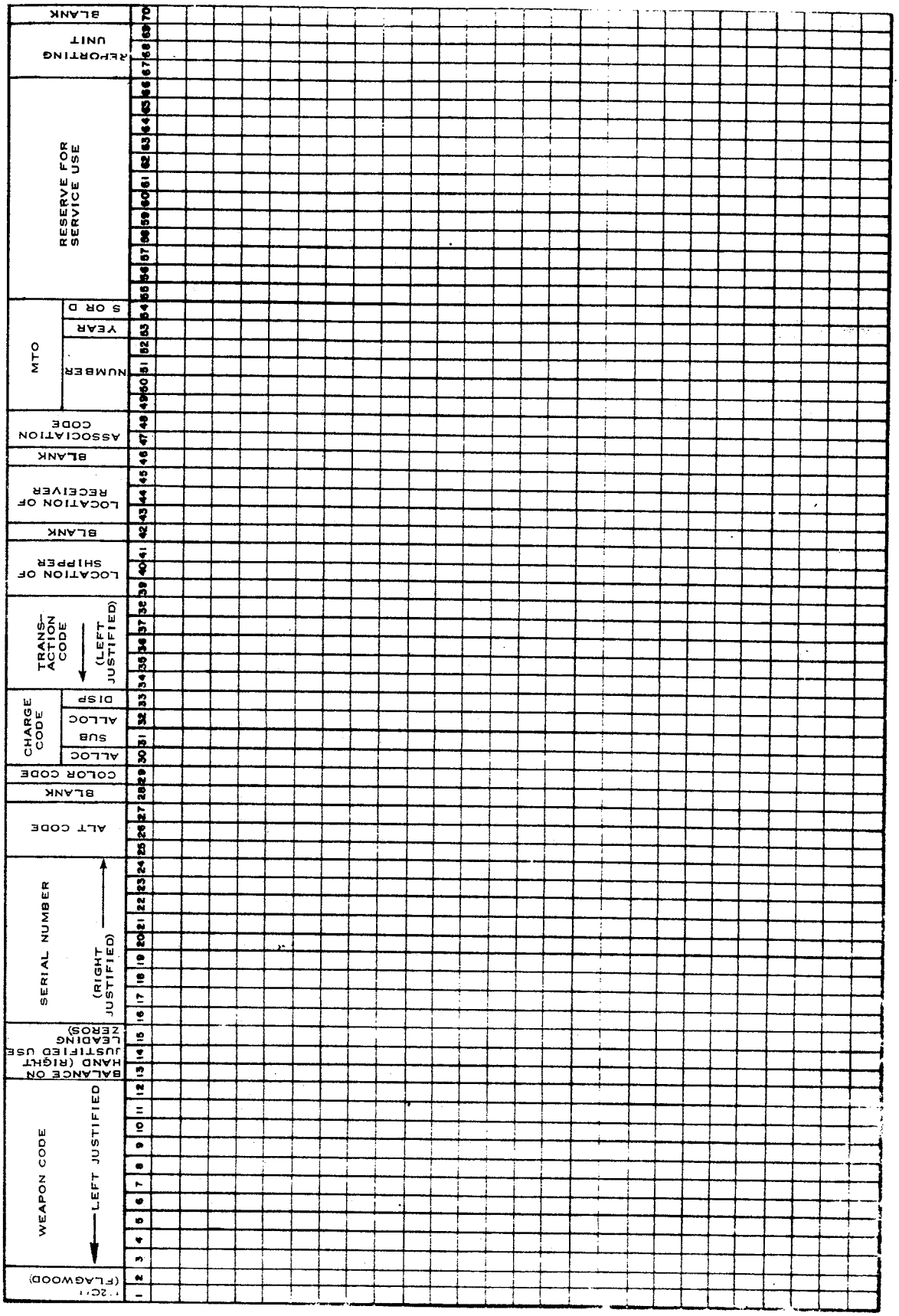


Figure 5-7. Creation sheet—2C card.

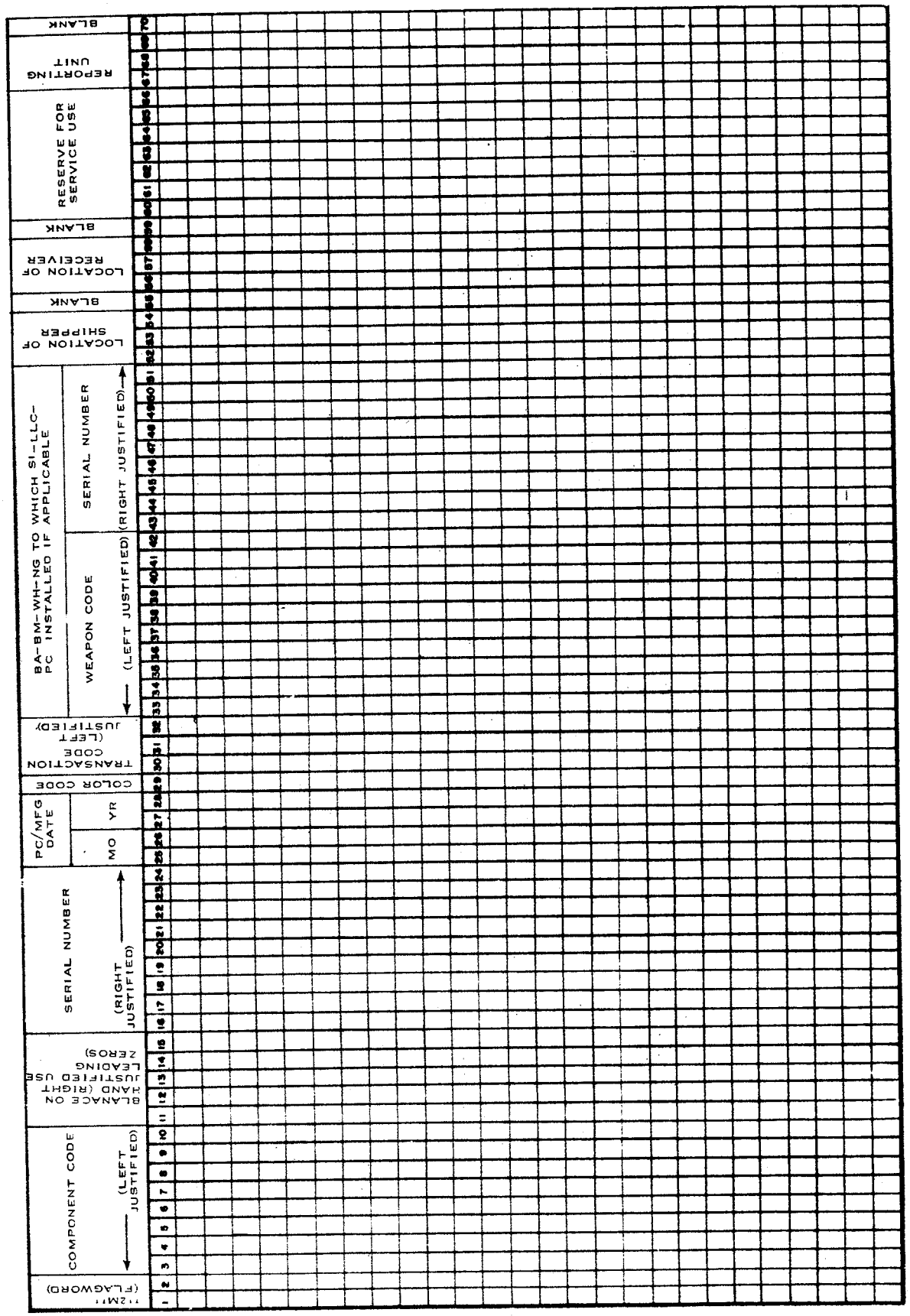


Figure 5-8. Creation sheet—2M.

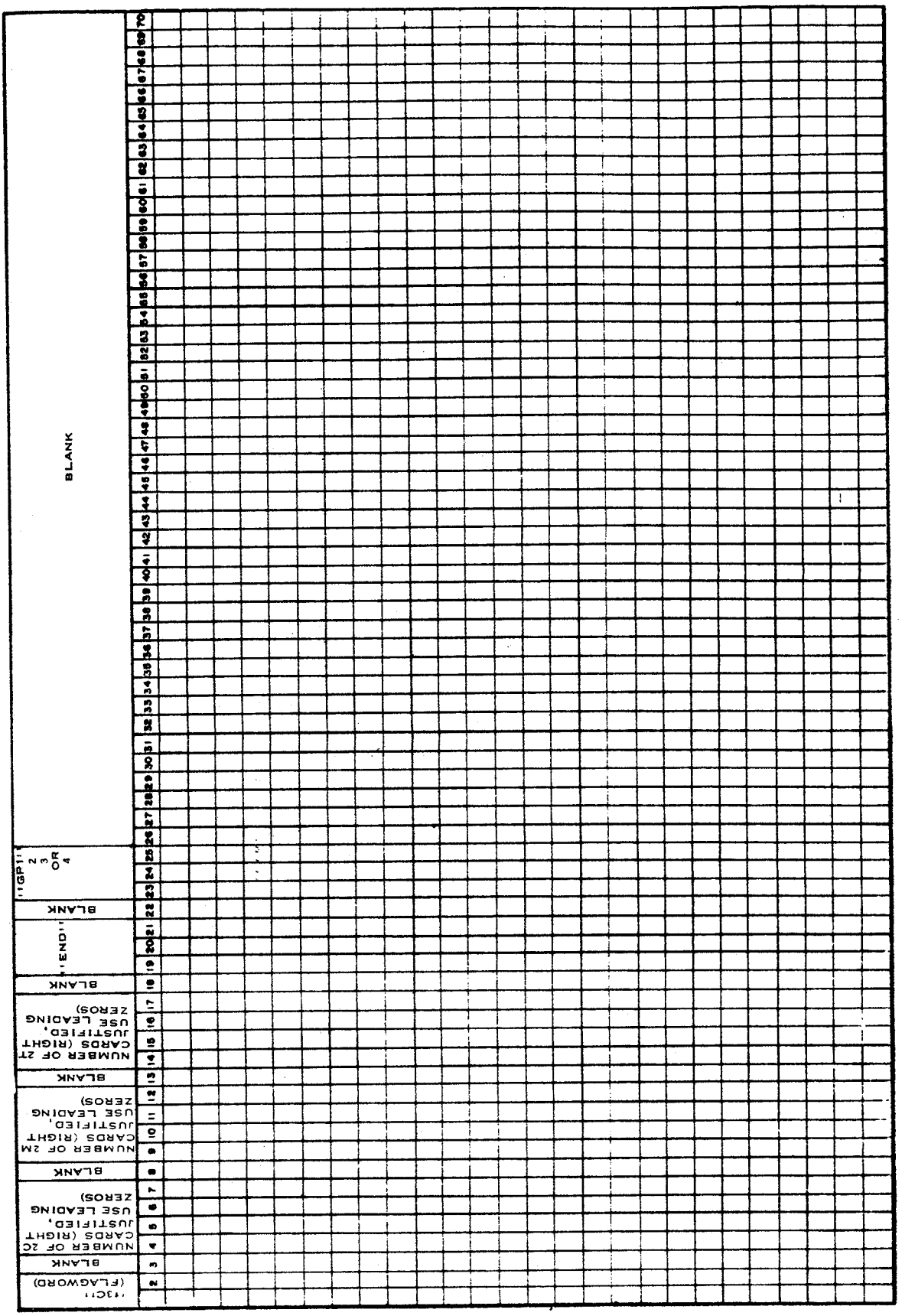


Figure 5–9. Creation sheet—3C.

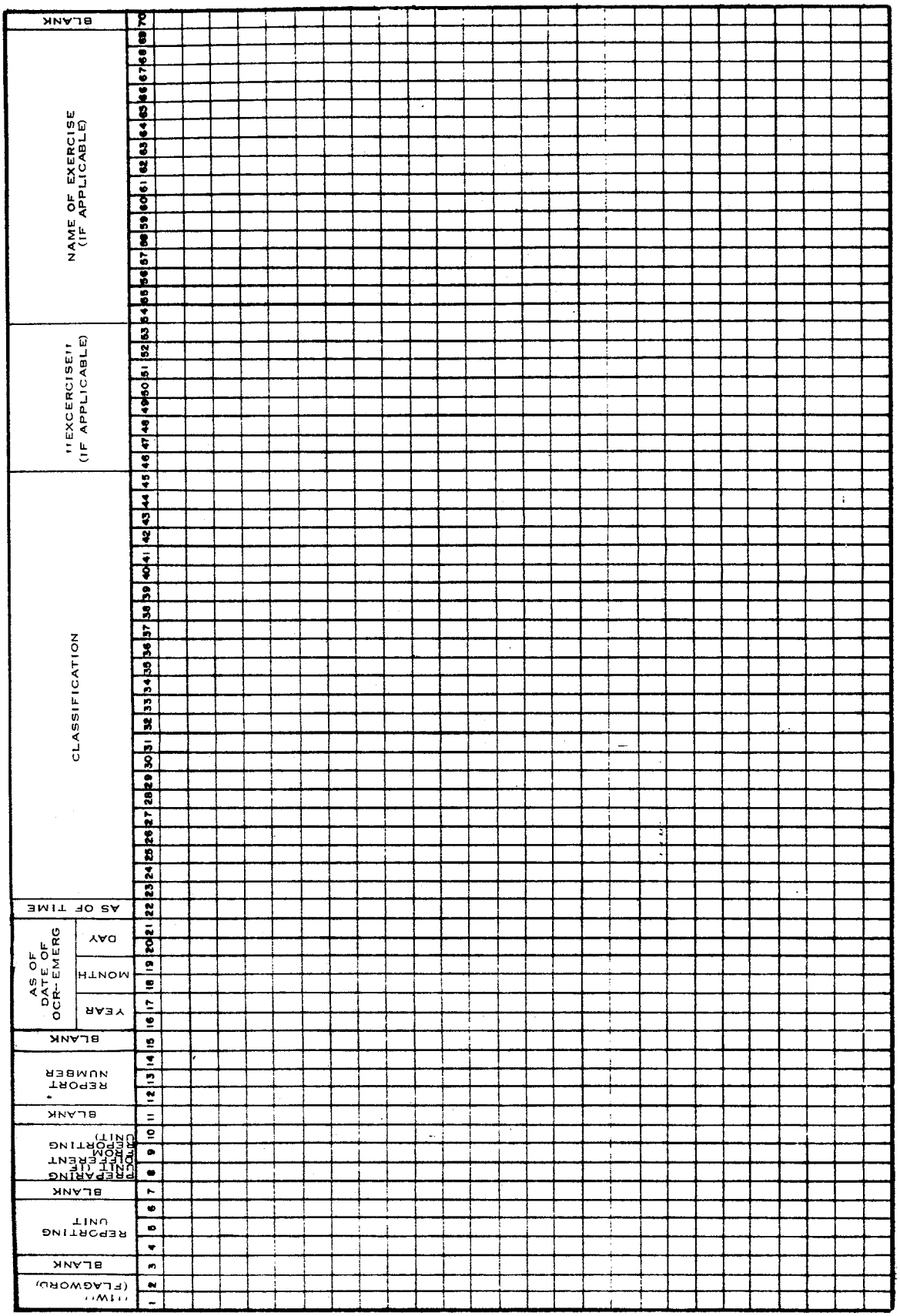


Figure 5–10. Creation sheet—1W.

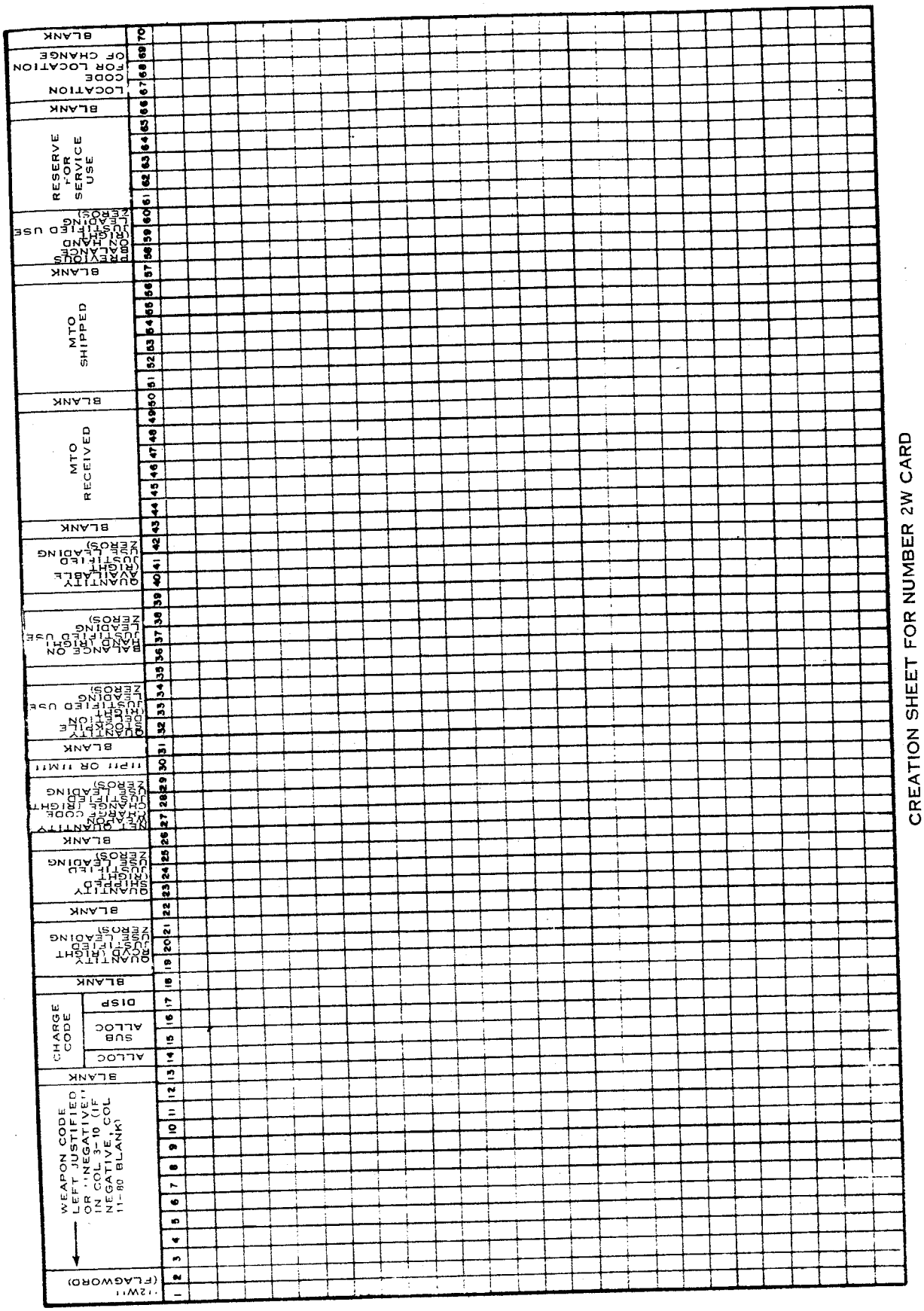


Figure 5–11. Creation sheet—2W.

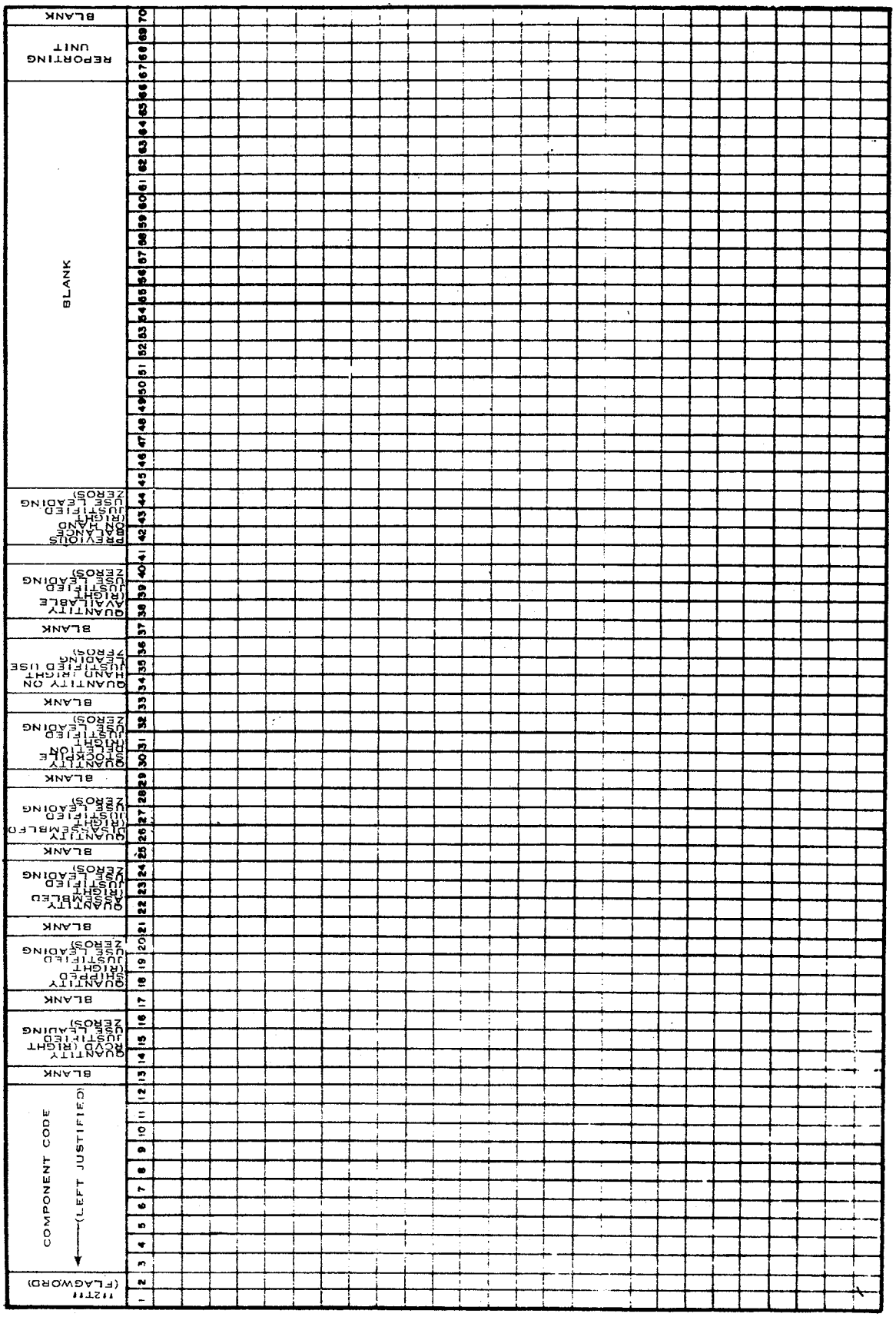


Figure 5–12. Creation sheet—2T card.

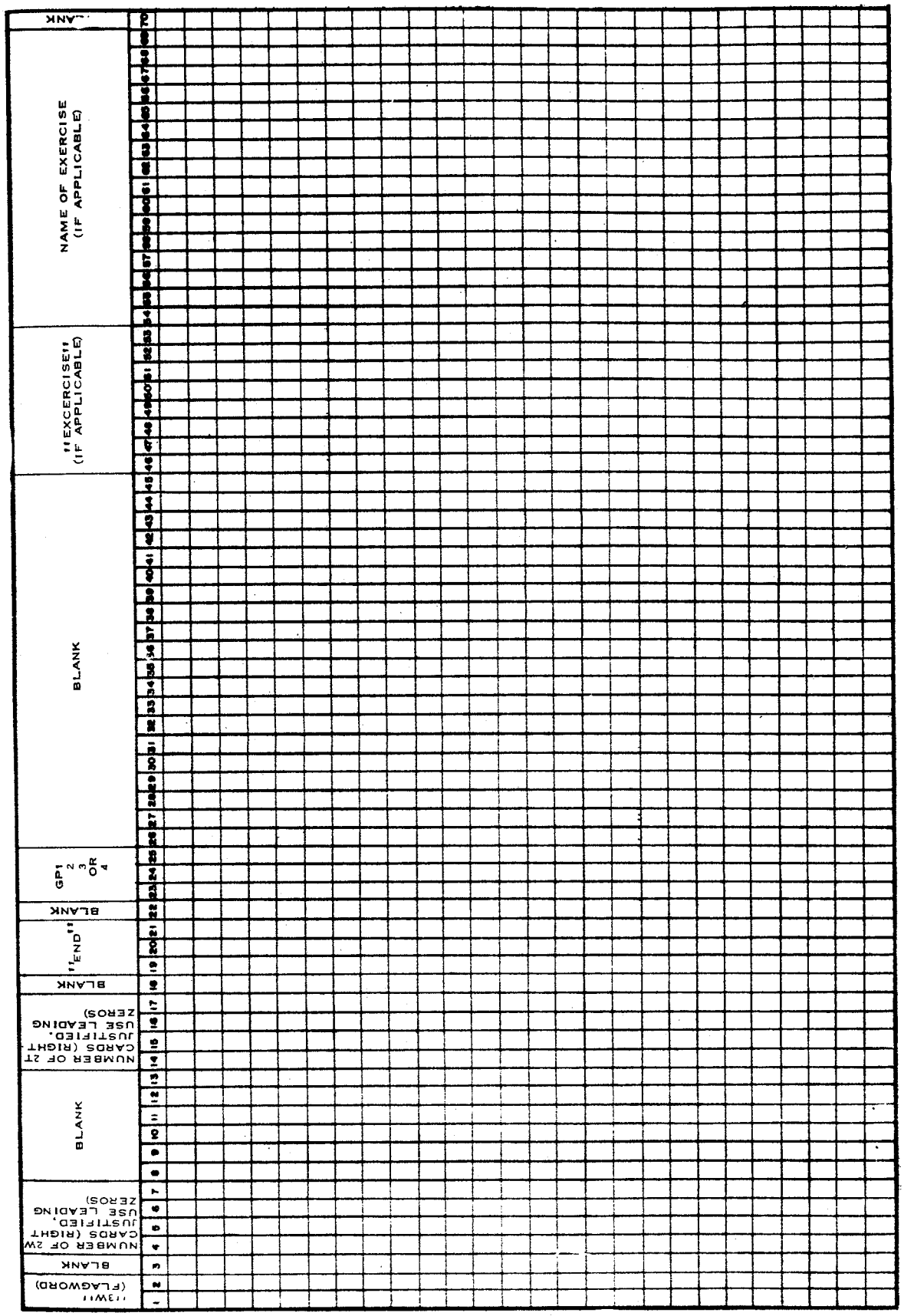


Figure 5–13. Creation sheet—3W card.

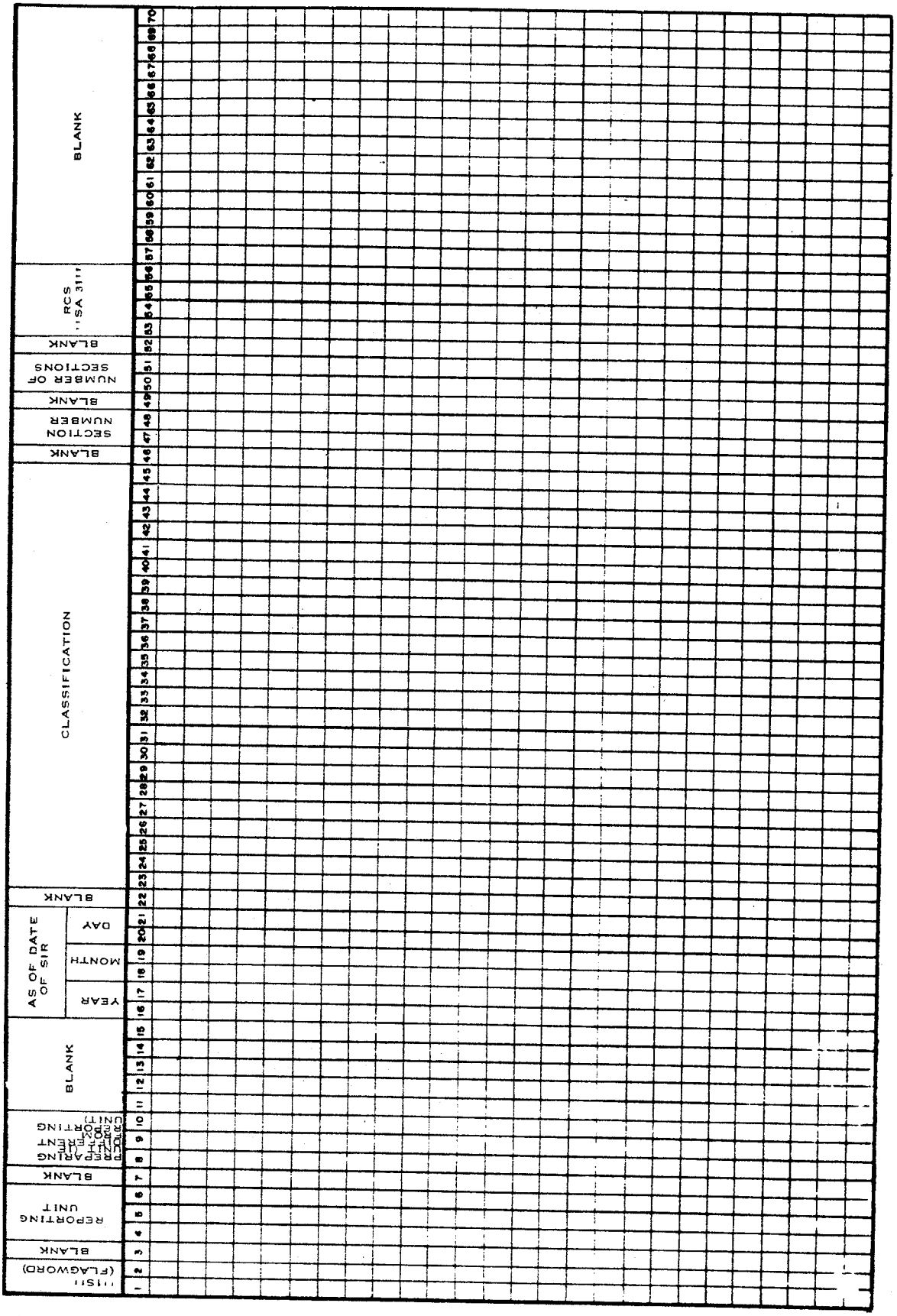


Figure 5-14. Creation sheet—1S card.

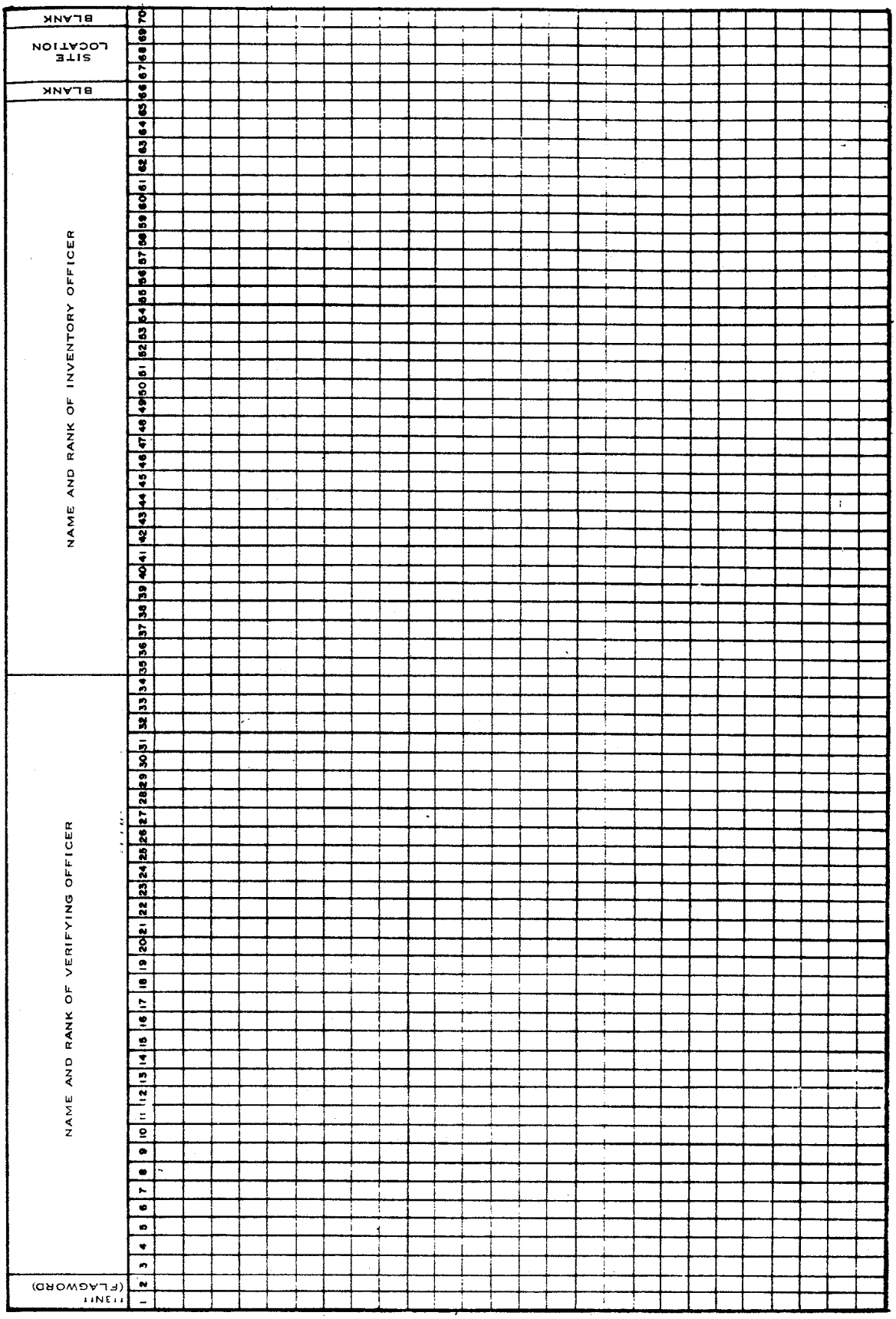


Figure 5–15. Creation sheet—3N card.

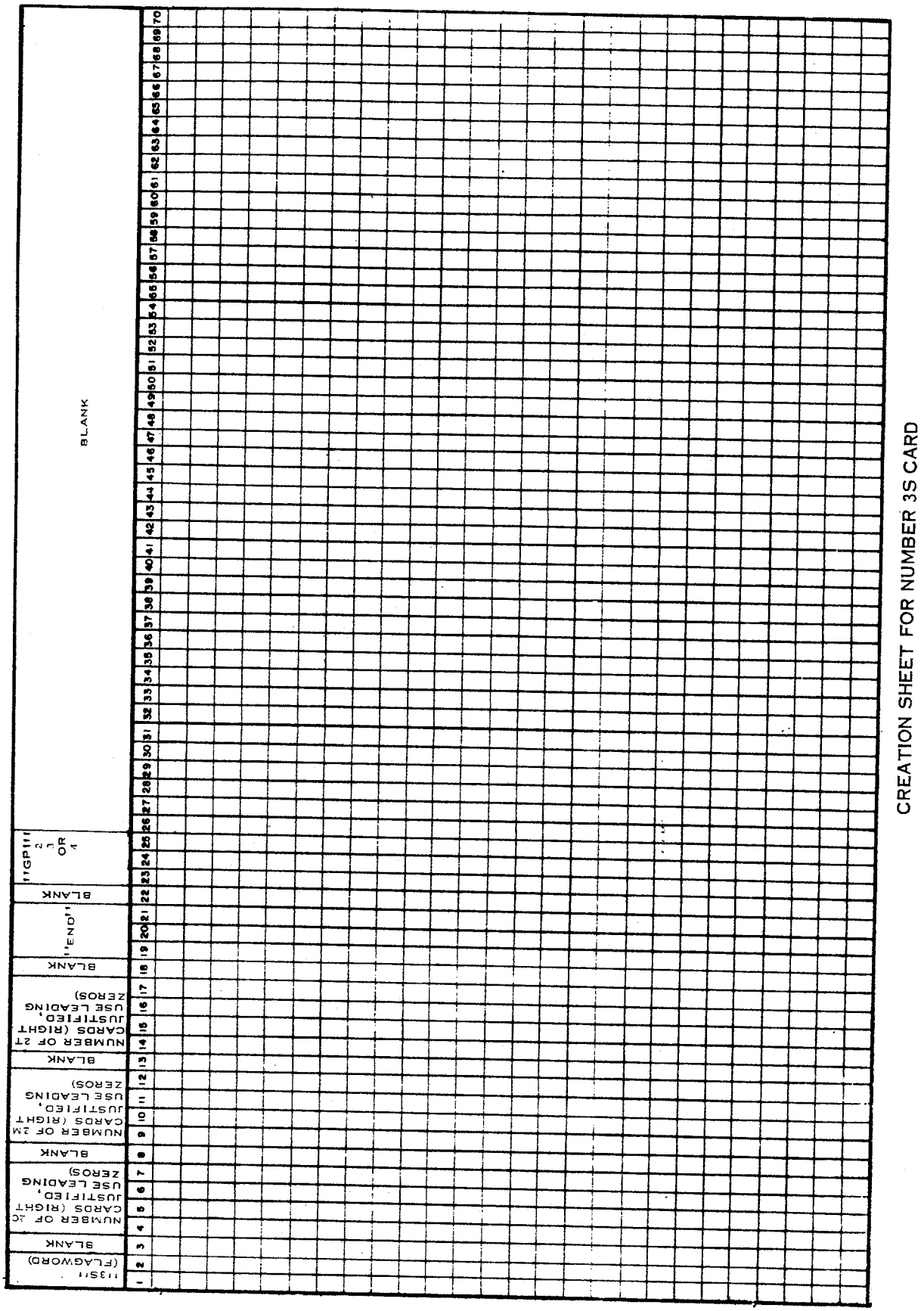


Figure 5–16. Creation sheet—3S card

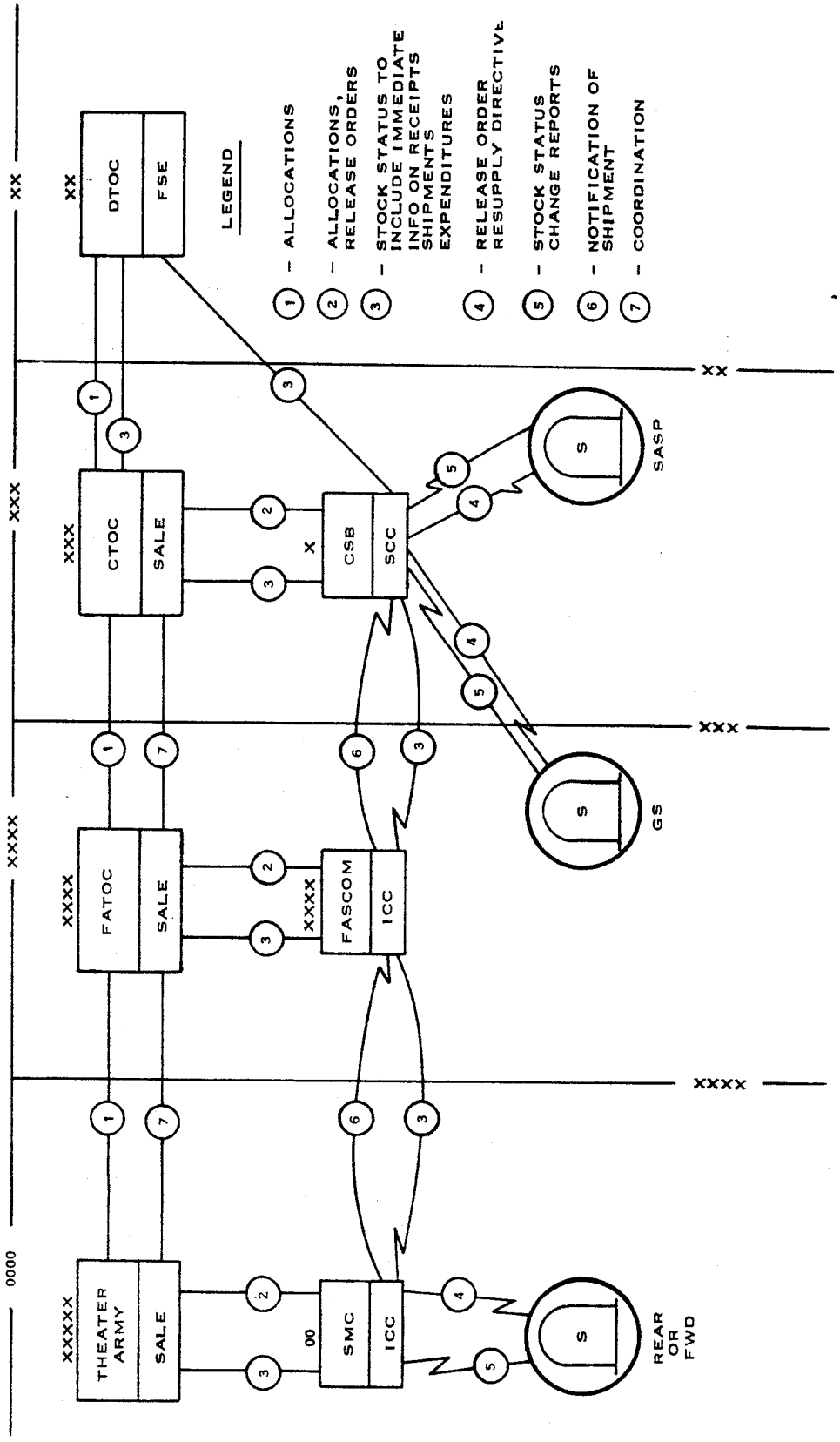


Figure 5–17. Control of special ammunition.

general to commanding general beginning at theater army and ending at the combat divisions. Commanders will keep their headquarters advised on expenditures as they occur (fig 5–17).

b. Logistical control.

(1) *COMMZ.* Inventory control of special ammunition is accomplished by the Supply and Maintenance Command ICC. Logistical Control of special ammunition is enhanced by a Special Ammunition Logistical Element (SALE). The SALE, organic to the Supply and Maintenance Command ICC, will be organized at the direction of Supply and Maintenance Command and theater army. It will be physically located at the theater army or air defense headquarters to aid the Supply and Maintenance Command ICC in carrying out the desires of the tactical commanders in regards to the supply and resupply of special ammunition (fig 5–17).

(2) *Field Army.*

(*a*) *Inventory control.* Inventory control of special ammunition is accomplished by the FASCOM ICC. The logistical control of special ammunition is enhanced by a SALE. The SALE will be organized from personnel organic to the FASCOM ICC unless otherwise directed by the field army commander. It will be physcially located at the Field Army Tactical Operations Center (FATOC) to aid the FASCOM ICC in carrying out the desires of the field army commander in regards to the supply and resupply of special ammunition.

(*b*) *Stock control.* Stock control of special ammunition for a corps slice of the combat zone is accomplished by the Corps Support Brigade (CSB) Stock Control Center (SCC). The Stock Control Center also is capable of establishing a SALE at the direction of the corps commander. The corps SALE will be physically located at the Corps Tactical Operations Center (CTOC) to aid the CSB SCC in expediting the release of special ammunition consistent with the desires of the corps commander.

CHAPTER 6

STORAGE

6–1. General

a. The information contained herein is general in nature and is intended as guidelines for field use. For further information on storage, refer to TM 9–1300–206, TM 9–1100-series, and TM 39-series. Reports pertaining to storage of special ammunition are covered in AR 700–71 and AR 780–62.

b. The environmental criteria and design standards presented are based on data obtained from the Atomic Energy Commission, the military departments, the Armed Services Explosives Safety Board, Defense Atomic Support Agency (DASA), and on the results of various studies of particular aspects or particular materials incorporated in nuclear weapons.

c. The term "nuclear weapon(s)" is used to refer to any of the following:

(1) Nuclear bombs for use in manned aircraft.

(2) Nuclear projectiles for use in all types of artillery, mortars, rocket launchers, etc.

(3) Nuclear demolition devices or other specialized ammunition.

(4) Nuclear warheads for use in missiles.

(5) Nuclear warheads for use in undersea warfare.

d. This information is concerned with military sites or facilities, the primary function of which is the storage and maintenance of special ammunition. It is not intended that the criteria and standards in this text fully and specifically cover the storage and handling of special ammunition items that are an integral part of established weapons system. Military weapon system design should include consideration of all criteria applicable to the particular weapon involved. Criteria for administration and service area buildings are not included. These items are governed by current Department of Defense instructions and by construction standards developed by the military departments.

6–2. Site Selection and Layout

a. The criteria applicable to the selection of sites for special ammunition storage facilities is not significantly different from the criteria utilized in the selection of sites for conventional ammunition storage facilities. Special considerations for special ammunition sites are outlined in the following paragraph. In many cases an existing conventional storage site will, with reasonable modifications, prove usable for special ammunition. All possibilities of utilizing existing facilities should be explored prior to undertaking new construction.

b. The strategic and monetary value of special ammunition items, their security classification, and the hazardous materials involved have imposed the following special considerations on the selection of storage sites.

(1) The probable physical, psychological, and political effects of possible accidents or incidents on military installations and civilian communities.

(2) Security staff officers must be consulted during site selection, planning, and design phases to insure that all security aspects are fully considered.

(3) The advisability of locating a special ammunition facility near or with an existing military installation in order to simplify the provisioning of security forces and logistical support. Such a concentration would offer a very lucrative target to an enemy force. The tactical and operational consideration must be carefully weighed.

(4) The possibility that vulnerability may be reduced by careful site selection and that expensive protective construction may be eliminated or reduced by early consideration of the possibilities of hardening through dispersion or through the protection offered by natural terrain features.

6–3. Safety

Important safety aspects that must be considered in the planning and design of a site are outlined below:

a. Quantity/distance safety requirements published by the Department of Defense in directives (TM 9–1300–206) are applicable to the high explosives and equivalent propellant contained in nuclear weapons.

b. Plutonium safety requirements for the storage, handling, and transportation of weapons are discussed in AEC–DASA technical manuals on transportation and storage safety for nuclear weapons and components (TM 39–20–12).

c. Minimum spacing requirements for weapons and for nuclear components are established to avoid excessive nuclear interaction of radioactive materials in adjacent arrays of weapons or components. These requirements are discussed in AEC–DASA technical manual on transportation and storage safety for nuclear weapons and components (TM 39–20–12).

6–4. Security Requirements

a. The security system at special ammunition weapon storage sites should be oriented to focus on the protection and safeguarding of materiel rather than on the security of the area in which the materiel is stored or handled.

b. It is not possible to specify arbitrarily the minimum requirements in manpower and equipment, intrusion detection systems, etc., at special ammunition storage and maintenance facilities. However, the objectives of the security measures should be to:

(1) Prevent unauthorized access to classified materiel.

(2) Prevent willful unauthorized detonation.

(3) Prevent theft or willful sabotage short of detonation.

c. The degree of security actually attained at an installation depends on many factors, including the following:

(1) The security plan.

(2) The strength and effectiveness of the security guard system.

(3) The effectiveness of the access control.

(4) The effectiveness of physical barriers.

(5) The effectiveness of anti-intrusion systems and devices.

(6) The effectiveness of security lighting.

6–5. Design Criteria

At certain storage sites, buildings or structures of special design may be required for the assembly and maintenance of special ammunition. In general, however, the design criteria observed in good military or engineering practice are adequate for special ammunition facilities provided due allowance is made for:

a. Limitations on the storage of plutonium-bearing weapons.

b. More stringent security requirements than those normally encountered.

c. Certain instrumentation requirements for processing of weapons.

6–6. Test And Handling Equipment Data

The site designer should consult the particular weapons manual to ascertain what materials handling equipment is required for the accomplishment of the site mission. From this information the designer should determine the requirement for vehicle door sizes, hoist capacities, overhead clearance, and floor loadings. If warhead and missile maintenance or storage operations are combined, the site designer should consult applicable service weapon system publications to determine the controlling design criteria with respect to the combined items.

6–7. Planning Assistance

a. The Defense Atomic Support Agency will, when requested, assist the military departments and the unified and specified commands by providing technical engineering services and assistance in connection with the design and construction of facilities, including related physical security system.

b. The Defense Atomic Support Agency will, if requested by the interested service, review the design of nuclear weapons facilities to determine conformance to established criteria. Adequate review is dependent on an examination of graphical and written description material sufficient to permit a full understanding of those features of the site that affect the safety, security, and operational reliability of the weapons and normally consists of the following:

(1) A check to determine that all applicable interior explosive quantity/distance restrictions, plutonium quantity restrictions, and weapon criticality restrictions have been observed. Submission of preliminary or definitive site layout drawings or sketches annotated to show the location and type of nuclear weapons normally stored or maintained at the site together with the location and

quantity of conventional explosives, propellants, flammables, or other explosive hazards, will permit such a check. A drawing similar to SFM–FC–2 (Storage Facility Manual) showing planned loadings and required distances will suffice for this purpose. If available, written material outlining the operation of the site should be submitted.

(2) A check to determine that all applicable exterior explosive quantity/distance restrictions have been observed. Submission of a preliminary layout drawing, a site layout sketch, or a large-scale vicinity map that portrays inhabited areas and important utilities, traveled routes, and man-made features located within and immediately outside of the extreme applicable explosive safety distance set forth in Department of Defense quantity/distance standards will permit such a check. A drawing similar to SFM–FC–2 showing planned loadings and required distances will suffice for this purpose. Topographical information should be included where terrain features would have a significant influence on the effect of an explosion.

(3) A check to determine that facilities of a new type, or major modification of existing facilities, do not incorporate features that represent a safety or security hazard to nuclear weapons. Submission of definitive or preliminary drawings sufficient to clearly depict the principal features of the site as a whole and the layout and type of construction of buildings and installations used in the storing and handling of nuclear weapons will permit such a check.

(4) The adequacy of physical security features will be checked. Submission of preliminary or definitive drawings indicating the layout of all security features such as perimeter barriers, perimeter lighting, fences, and guardhouses and type of construction to be employed in providing these features will permit such a review. These drawings should be accompanied by a copy of the security plan for the site. If an intrusion alarm system is to be employed, the type of installation should be indicated. If a nonstandard or locally fabricated alarm system is to be employed, outline specifications and circuitry drawings should be submitted.

(5) In addition to the above material, a small-scale vicinity map locating the site in relation to large inhabited areas, main traveled routes, and other important features within a radius of 25 to 50 miles is of great assistance in analyzing safety and security aspects of site operation as they affect the general public.

c. Submission of definitive and preliminary drawings or adequate sketches is desirable for DASA review purposes, as is the submission of a typical siting plan, and will preclude time-consuming changes in finished drawings. Review of selected working drawings and applicable specifications can, of course, be accomplished more promptly than the review of a full set of plans and specifications. DASA will, however, perform any review desired and will furnish technical data on the suitability of security alarms available from commercial and military sources in accordance with the service requirements.

d. FM 9–15, FM 31–45, and AR 75–15 contain information pertinent to EOD Service to the field and EOD unit Operations respectively.

6–8. Summary

a. Because of their classification most special ammunition items are stored in restricted areas. Layouts of special ammunition storage areas will depend on the terrain, type, and quantity of materiel and security. Generally, the larger the area the more complex it will be. For example, a depot will usually be more complex than an SASP, owing to its diversified mission.

b. Barricades, warehouses, ordnance igloos, and other types of structures are used for storage of special ammunition. Quantity/distance and compatibility limits for conventional explosives and propellants are applicable to special ammunition as well. In addition, special limits must be observed. These limits are contained in AR 190–3, TM 3–250, TM 9–1300–206, TM 39–20–12, applicable regulations on storage criteria for special ammunition, and system peculiar publications.

CHAPTER 7

TRANSPORTATION

7–1. General

The movement of special ammunition can be effected only after responsible staff elements have completed extensive planning and coordination functions. All phases of the planning, coordination and the resulting movement must receive the closest supervision. Personnel involved with any special ammunition movement must be familiar with the Army Regulations, Technical Manuals, Department of Transportation Regulations, Local, State, and Federal Laws (for CONUS movements), and all other regulatory publications applicable to the particular items being shipped. Routing of shipments of special ammunition will be carefully planned, scheduled and coordinated by the consignor in advance of actual movement. Shipments should be routed to avoid densely populated areas to the maximum extent possible. Detailed information pertaining to the transportation of special ammunition is contained in TM 55–602.

7–2. Responsibilities for Planning and Preparation for Movement

a. CONUS.

(1) *Deputy Chief of Staff for Logistics (DCSLOG).* DCSLOG furnishes U.S. Army Materiel Command (USAMC) with forecasted dispersal requirements. DCSLOG coordinates and arranges with the Defense Atomic Support Agency (DASA) for the release of materiel from Atomic Energy Commission (AEC) custody. This authority is delegated to U.S. Army Ammunition Procurement and Supply Agency (USAAPSA) for routine dispersals. DCSLOG directs USAMC to ship specific quantities to designated commands. DCSLOG will also provide USAAPSA with Special Assignment Airlift Mission (SAAM) numbers.

(2) *Commanding General, U.S. Army Materiel Command (USAMC).* USAMC will prepare weapons stored in AMC installations for shipment in accordance with disposal directives from DCSLOG.

(3) *Commanding General, U.S. Army Ammunition Procurement and Supply Agency (USAAPSA).* USAAPSA will issue supply directives to effect dispersal. USAAPSA plans all movements originating or transiting non-Army agencies, all shipments by military air, and shipments originating or terminating at Army Air Defense Command (ARADCOM) sites.

(4) *Consignor and consignee.* Consignors and consignees are responsible for the preparation for shipment and receipt of materiel in accordance with shipping instructions. Reports of shipment (REPSHIP) will be prepared by consignors.

(5) *Additional responsibilities of agencies and individuals are contained in AR 55–203.*

b. Outside CONUS.

(1) AMC will notify by REPSHIP overseas commanders and participating agencies of impending movements from CONUS to OCONUS in sufficient time to affect proper planning at all levels.

(2) Oversea commanders will:

(*a*) Implement AR 55–203 within their commands.

(*b*) Establish procedures and responsibilities for the shipment and receipt of materiel at oversea aerial and water terminal.

(*c*) Provide APSA with forecasts of shipments.

(*d*) Provide APSA with current lists of authorized recipients to receipt for material from CONUS courier officer.

(*e*) Advise APSA of status of retrograde materiel.

c. Consignor/Consignee Responsibilities: Detailed instructions for consignors and consignees of Special Ammunition items are found in AR 55–8, AR 55–56, AR 55–203 and AR 740–32.

(1) Consignor responsibilities include but are not limited to:

(*a*) Effect shipment as directed.

(*b*) Plan movements and obtain routing and release information.

(*c*) Arrange for technical escort and security escort personnel as required.

(*d*) Inspect, load, block, and brace transportation equipment.

(*e*) Maintain security of shipment until it is released to courier.

(*f*) Prepare necessary paperwork, including Classified Cargo Courier Receipts (DA Form 2772) and reports of shipment.

(*g*) Retain property accountability through the courier until materiel is signed for by the consignee.

(*h*) Notify area commander in advance of shipment to allow for provision of necessary emergency service to support the shipment.

(*i*) Provide the courier of overseas shipments with the necessary means to destroy nuclear ammunition to prevent capture.

(2) Consignee responsibilities include but are not limited to:

(*a*) Arrange for the receipt of the materiel, by providing designated agencies with a list of authorized recipients, so that the courier may identify the recipient and be relieved of his responsibility promptly.

(*b*) Provide security during and after the unloading of the materiel.

(*c*) Arrange for the billeting, messing, and return transportation of escort personnel and equipment to their permanent duty station.

(*d*) Dispatching a Report of Arrival of Shipment so that emergency forces may be released.

(*e*) Prepare Report of Packaging and Handling Deficiencies (DD Form 6) upon receipt of materiel which has not been properly packaged and marked for shipment, or which has been damaged in transit.

(*f*) Prepare Discrepancy in Shipment Report (SF 361) if required.

d. Convoy Commander. Convoy commander is a term used collectively to designate the persons who have operational control of a means of transportation; e.g., the pilot of an aircraft, the master of a ship, or the person in charge of a convoy of trucks. These persons have many responsibilities in common; i.e., they are responsible for the proper operation of the transport vehicles, the course traveled, and such matters as feeding crews, fueling, and the other tasks which must be performed for any movement.

7–3. Transportation

a. Modes. The following modes of transportation are authorized for special ammunition.

(1) Within CONUS:

(*a*) Commercial rail, exclusive use as contracted by the Army.

(*b*) Commercial motor vehicles, exclusive use as contracted by the Army.

(*c*) Military motor vehicles.

(*d*) Military aircraft.

1. Military Airlift Command (MAC).

2. Army Aircraft (Single engine fixed and rotary wing aircraft will not be utilized.)

(2) Between CONUS and oversea areas:

(*a*) Military aircraft, (MAC).

(*b*) Military Sea Transportation Service (MSTS) vessels.

(3) Within oversea areas:

(*a*) Military aircraft.

(*b*) Military motor vehicles.

(*c*) Railroads.

b. Transportation by Motor Vehicle.

(1) *Personnel.* A courier, security escorts and when necessary technical escorts will be provided for special ammunition shipments by motorized vehicle. The shipments must remain under constant surveillance by security personnel. The number of security escorts and technical escorts required will be determined in accordance with guidance contained in AR 55–16, AR 190–60, and AR 740–32 as appropriate.

(2) *Equipment.* As a minimum two escort vehicles with two security escorts in each will be used. One security escort should accompany each cargo bearing vehicle. At least two escort vehicles should be equipped to communicate with each other. At least one escort vehicle (this may be one of the foregoing) should be capable of communicating with the control point. Major oversea commands may require that the convoy also include two buffer vehicles that are equivalent in size and weight to the cargo-bearing vehicles. In addition, a wrecker may be required to accompany the convoy.

(3) *Inspection Requirements.* Prior to being loaded with special ammunition, all motor vehicles must receive a complete inspection. A DD Form 626 (Vehicle Inspection) will be prepared for each vehicle transporting special ammunition in accordance with AR 55–355. Prior to movement

assure that load is secured as prescribed by theater SOP and by DA technical manuals, as applicable.

(4) *Speed Limits.* Local commanders will establish speed limits based upon conditions in local areas.

c. Shipment by Fixed or Rotary Wing Aircraft. Movement of special ammunition by helicopter, single or twin engine aircraft within overseas areas will be governed by theater SOP and by DA technical manuals of the TM 55-series which prescribe specific methods for securing weapons to aircraft or helicopters. It is desirable that at least two helicopters be used for every shipment so that if one is forced down, the personnel on board the other can secure the shipment until additional help can be secured. Movement of special ammunition is also governed by TM 10–500-series manuals.

d. Shipment by MAC Aircraft. MAC Channel Airlift and MAC Special Airlift Assignment Mission, as appropriate for particular type of special ammunition involved are obtained IAW AR 55–203, AR 55–56 and AR 55–8 under existing procedures outlined in AR 59–2 and 59–8 as applicable.

7–4. Escort of Special Ammunition

a. Couriers.

(1) *General.* Commissioned officers and warrant officers who are assigned as couriers will possess a final type security clearance equal to, or greater than, the highest security classification of the cargo and meet the requirements of AR 50–3. Couriers must be senior to guards and be familiar with the use of the security equipment necessary for successful accomplishment of the mission and with procedures pertaining to the transportation, safety, firefighting procedures, and security of the Special Ammunition for which they are receipted. The regulations governing physical security of shipments are AR 190–60 and AR 55–16.

(2) *Responsibilities.* The courier officer of a shipment of Special Ammunition:

(*a*) Assumes property responsibility from the time he signs for the cargo until he is released by transferring custody to the authorized recipient.

(*b*) Provides required safety and security for the shipment at all times. He must never receipt for cargo for which he cannot maintain custody at all times during the movement.

(*c*) Is in command of all security escorts during the movement and designates a chain of successive command among the escorts to carry out his duties in the event he is incapacitated.

(*d*) Assures, prior to departure, that security personnel are properly equipped, have received and understand their special orders, have appropriate security clearances, and that provisions have been made for their return transportation when applicable.

(*e*) Insures that all escort personnel are familiar with:

1. Duties and conduct while en route.

2. Actions to be taken in an emergency.

3. The hazardous nature, importance to national defense, and value of the cargo.

4. The security classification of the materiel and the movement.

(*f*) Insures that nuclear weapons are guarded continuously by at least two security escorts. (Two Man Rule)

(*g*) At the destination, insures that the authorized recipient is properly identified. In case of doubt, he should contact the appropriate CONUS or overseas commander for further instructions.

(*h*) In an overseas theater, orders the destruction of special ammunition to prevent capture in accordance with command directives, policies and procedures.

b. Security Escort or Security Guard.

(1) Personnel who are specifically trained, equipped and assigned to perform the mission of safeguarding the security interest. Security escorts/guards are not necessarily technically qualified on the materiel they are safeguarding.

(2) Security escorts will be armed and will have security clearances commensurate with the materiel being shipped.

(3) Security escorts will be provided with detailed special orders that are thoroughly understood prior to assumption of duty.

c. Explosive Ordnance Disposal. During shipment of nuclear weapons, and other special ammunition as determined by the major commander, Explosive Ordnance Disposal Control (EODC) Units, whose area of responsibility are included in the movement route, will be notified. In the event of an accident/incident or fire where damage or suspected damage to the ammunition occurs, the EODC will dispatch units and/or personnel to the

incident scene to eliminate or reduce all possible hazards.

7–5. Report of Shipment (REPSHIP)

a. General. REPSHIP data is based upon consolidation of information provided by participating agencies. The REPSHIP message will be appropriately classified and must contain specified information (AR 55–8, AR 55–16, AR 55–56, and AR 55–203) concerning the materiel being shipped.

b. Advance REPSHIP. The consignor is responsible for preparing and transmitting to all participating agencies an advance REPSHIP message in sufficient time to allow these agencies to affect advance planning.

c. Final REPSHIP. The consignor will also prepare and transmit a final REPSHIP on departure of the shipment.

7–6. Report of Arrival

The ultimate consignee will submit to the consignor a report of arrival upon receipt of a shipment of special ammunition. Distribution of the report of arrival and specific information to be contained therein are outlined in the Army Regulation for transportation of particular special ammunition items.

7–7. Government Bills of Lading

The consignor or his representative (Transportation Officer) will issue Government Bills of Lading (GBL) in accordance with AR 55–355.

7–8. Marking and Labeling

Signs, labels and marking on all items being shipped must conform to the rules and regulations of all regulatory bodies having jurisdiction during movement. Oversea commands may require descriptive markings to be covered to prevent visual verification of movement of special ammunition items.

7–9. Emergency Procedures

a. Accident/Incident Control Procedures. Actions in event of accident or incident will be in accordance with AR 385–40, AR 50–2, and AR 385–14, and those regulations pertinent to the particular type of special ammunition involved.

b. Jettison of Nuclear Weapons. Circumstances may arise in which the aircraft commander decides that cargo must be jettisoned to insure the safety of the aircraft. The courier officer of an air shipment must read AR 95–55 before takeoff. This regulation provides guidance on the jettison of nuclear weapons.

CHAPTER 8

CALIBRATION/MAINTENANCE CALIBRATION AND LOAD TESTING

Section I. GENERAL

8–1. Army Calibration Program

The Army calibration program is designed to insure the accuracy of test and measuring equipment (T&ME) used in research and development, industrial, and field service functions. This standardization, performed by Army calibration activities, assures uniformity of measurements through design, engineering, production, and maintenance support stages of all Army equipment. To sustain this basic philosophy, standardization of measurement must be continued on down to the using unit, where the equipment is used. This is done through calibration, maintenance calibration and, to a certain extent, by load testing.

8–2. Calibration After Local Repair

DS/GS units should not attempt to calibrate any item of measuring equipment which is listed in any DA publication as being the sole responsibility of secondary transfer calibration teams. The only exception being T&ME repaired by DS/GS activities requiring "A" level calibration. The repaired equipment will be maintenance calibrated and annotated as "C" level calibration until the next scheduled "A" level calibration period. This procedure should be a part of the local SOP. The exception is considered necessary only when replacement T&ME is not available to assure continued mission performance.

8–3. Calibration in Storage

Test and measuring equipment that is in storage may have a CBU (calibrate before use) label affixed and calibrated only prior to issue.

Section II. CALIBRATION/MAINTENANCE CALIBRATION

8–4. Definitions

In addition to the definitions in AR 310–25, AR 750–25 and TB 750–25, the following apply:

a. Calibration. The comparison of an instrument of unverified accuracy to an instrument of known and greater accuracy to detect and correct any discrepancy in the accuracy of the unverified instrument.

(1) *"A" Level Calibration.* That function performed by the Army Standards Laboratory, Area Calibration Laboratories, Internal Calibration Facilities, and Area Calibration Teams, when using measurement standards to accomplish calibration.

(2) *"C" Level (Maintenance) Calibration.* That function performed by test and measuring equipment users to accomplish calibration using their calibrated (A or C level) test and measuring equipment.

b. Repair Incidental to Calibration. Those repairs found necessary to bring an operating T&ME within the specified tolerances at the time the equipment is being calibrated. This includes replacement of parts that are defective or have changed value and prevent calibration, but have not rendered the equipment inoperative.

8–5. General

a. A single Department of the Army Metrology and Calibration System has been established to assure that repeatability of measurement accuracies are traceable from the test and measuring equipment (T&ME) used by the maintenance unit to the National Bureau of Standards. In order to assure this transfer of measurement accuracies to the user's T&ME, the U.S. Army Metrology and Calibration Center (AMCC) located at Redstone Arsenal, Alabama, is charged with providing Army-wide technical direction, technical assist-

ance, logistic support, engineering support, monitoring, and evaluating the total U.S. Army Metrology and Calibration System. To insure that adequate calibration service is available, the single Army Standards Laboratory is located at Redstone Arsenal, Alabama, while Area Calibration Laboratories, Area Calibration Teams, and Army Calibration Companies (refer to TB 750–25) are established at strategic locations Army-wide. These activities provide cyclic "A" level calibration service for items listed in the Calibration Requirements TB 750–236 as requiring "A" level calibration and in accordance with the calibration interval specified therein.

b. The transfer of measurement accuracies from NBS to field maintenance activities is as follows:

(1) *The National Bureau of Standards,* using their national standards provide "A" level calibration service for the primary reference standards maintained and used by the Army Standards Laboratory.

(2) *The Army Standards Laboratory,* using their primary reference standards, provide "A" level calibration service for secondary reference standards that are maintained and used by Area Calibration Laboratories.

(3) *The Area Calibration Laboratories,* using their secondary reference standards, provide "A" level calibration service for secondary transfer standards that are maintained and used by Area Calibration Teams; also for maintenance support T&ME (within their assigned geographic area) that cannot be calibrated by the Area Calibration Team.

(4) *The Area Calibration Teams,* using their secondary transfer standards, provide "A" level calibration service for maintenance support T&ME that is designated in the Calibration Requirements TB 750–236 as requiring "A" level calibration. These teams are usually based at an Area Calibration Laboratory and, using mobile vans to transport their standards, they provide "A" level calibration service and repair incidental to calibration for field maintenance units within an assigned geographic area (refer to TB 750–25).

Note: The structure and operation of the Army Calibration Company includes Area Calibration Laboratories and Area Calibration Teams (refer to FM 29–27).

(5) *The DS/GS/Depot Maintenance Units,* using their calibrated T&ME (A or C level), provide "C" level (maintenance) calibration service for T&ME listed in the Calibration Requirements TB 750–236 as requiring "C" level (maintenance) calibration. This calibration is accomplished for their own T&ME and the T&ME of other units for which they provide maintenance support, and for which they have the "C" level (maintenance) calibration capability.

8–6. Operational Guidelines

The accuracies required by advance technology dictate the need for close control over T&ME that is used for maintenance and testing of Army materiel. The users of T&ME are charged with the responsibility for establishing local controls that will insure their T&ME is operating within the specified tolerances. To do so, they must determine whether their T&ME requires calibration, whether the user or a supporting calibration facility provides the calibration service, and that cyclic calibration of their T&ME is accomplished. In order to accomplish this task, Army-wide policy and guidance has been published in the form of Army Regulations, Technical Bulletins, and Major Army Command Regulations. These publications must be adhered to when establishing local controls. A résumé of the guidance contained in those publications is as follows:

a. Maintenance of Supplies and Equipment, Army Metrology and Calibration System, AR 750–25. This AR assigns responsibilities for establishment, maintenance, supervision, and control of the Army Metrology and Calibration System; the provisioning of measurement standards; the publication of calibration procedures; the development and publication of operational and procedural doctrine; and the provision of appropriate Army calibration facilities (military and civilian) and personnel.

b. Calibration Requirements for Maintenance of Army Materiel—TB 750–236. This TB must be used by all users of T&ME to determine their need for calibration service. TB 750–236 lists and identifies T&ME that requires calibration, it specifies: the level at which calibration shall be accomplished; the interval between cyclic calibrations; the calibration procedure that is to be used when an item is calibrated; and additional related information. The T&ME user must review TB 750–236 for information pertaining to the contents of his inventory. After determining whether or not each T&ME requires calibration; whether the user or a supporting calibration facility provides the service (level of calibration); the cali-

oration interval; etc., the calibration requirements of the T&ME inventory should be documented as one of the controls to assure accurate T&ME is used.

c. Army Equipment Record Procedures, TM 38–750, Chapter 6—Calibration Records, and Maintenance Management—Field Command Procedures TM 38–750–1. TM 38–750 outlines the preparation, use and disposition of forms and labels that are used in the Army Metrology and Calibration System. TM 38–750–1 outlines the keypunching and editing instructions for DA Form 2416, Calibration Data Card. DA Form 2416 is used to identify and schedule T&ME that requires calibration, and to record and report calibration actions. DA Form 2417, Unserviceable or Limited Use Tag identifies a T&ME that requires repair beyond that which is prescribed as the responsibility of the technician providing calibration service or it identifies the item as limited use and the limitations are stated. Under certain circumstances, DA Form 2417 identifies the item as limited use and the limitations are stated, or it identifies an item as unserviceable. DA label 80, U.S. Army Calibration System identifies an item that was calibrated to the required accuracies, the date calibration was accomplished, the date calibration is next due, and the activity that accomplished calibration.

d. Field Calibration Procedures, TB 750–25 provides procedural guidance and outlines responsibilities applicable to obtaining, providing and receiving calibration service. It encompasses both "A" and "C" level calibration within CONUS and OCONUS commands.

e. Commands subordinate to DA will supplement AR 750–25 to cover operation within their area.

f. Army Calibration Company, FM 29–27 describes the mission, organization, capabilities, employment, responsibilities and functions of the Army Calibration Company, TO&E 29–227.

Section III. LOAD TESTING

8–7. General

a. Load testing, usually considered an aspect of safety, is discussed in the same chapter with calibration and maintenance calibration because it is essentially an operation of testing and certifying that certain items can be used as intended. Load testing is not a function of calibration service and nothing in this manual should be interpreted as requiring calibration personnel to perform this service. The load testing process is sometimes referred to as proof load testing.

b. Some missile systems use special lifting equipment (lifting devices for missiles and other special items) that must be alined as well as load tested. Load testing for these items of hoisting equipment consists of two steps; step one verifies the structural strength of the equipment while step two determines if any part of the equipment has been distorted as a result of the load test. Step two usually requires a special alinement fixture built specially for the piece of equipment being load tested.

c. Accessories normally used as attachments to hoisting equipment should be load tested with the hoisting equipment. Accessory hoisting equipment not assigned to a particular piece of hoisting equipment should be inspected prior to each use and load tested at least once a year.

d. Prior to each day's operation, a visual inspection should be made of the hoisting equipment to detect any defective parts. All hoist cables should be inspected completely for kinking, broken wires, corrosion, socket separation etc., frequently enough to insure safe operation of the hoisting equipment.

e. DD Form 314 (Preventive Maintenance Schedule and record) will be used for scheduling load testing of all hoisting devices and accessory hoisting equipment.

8–8. Definitions

a. Load Testing. The use of a known weight, or load, to be imposed on hoisting equipment to verify the structural strength of the equipment in relation to the designed capacity of the equipment.

b. Hoisting Equipment. All devices and equipment used to hoist and handle material, such as cranes, derricks, tripods, A-frames, etc.

c. Accessory Hoisting Equipment. Equipment not permanently attached to hoisting devices, such as slings, lifting beams, spreader bars, etc.

d. Rated Capacity. The load that can be safely imposed on a load bearing device without reducing the designed structural strength of the device; maximum safe working load.

8-9. Purpose

Load testing consists of following prescribed procedures for conducting tests to determine if the equipment is structually adequate, in some cases properly alined, and satisfactory for safe field use.

8-10. Operation

Using units should send their hoisting equipment to the supporting maintenance unit for load testing. (Load testing is not performed by calibration technicians.) Each piece of hoisting equipment will be:

a. Submitted to the maintenance unit with a properly filled out DA Form 2407 (Maintenance Request.)

b. Load tested on an annual or semiannual basis or when equipment is modified or repaired in any manner that might affect its strength or lifting capability.

c. Stamped and dated as follows:

Load Tested
Date _____)

Use the U.S. Army Universal Stamping Kit and coat the stamping with varnish.

CHAPTER 9

MAINTENANCE OF SPECIAL AMMUNITION

9-1. General

Maintenance is any action taken which keeps an item in serviceable condition or restores an unserviceable item to a serviceable condition. The four categories of maintenance are: organizational, direct support, general support, and depot. Normal maintenance functions may include: repair, replacement, renovation, retrofit, modernization, tests, storage monitoring, inspection and quality control activities.

9-2. Maintenance Objective

The objective of every maintenance program is to retain materiel in a serviceable condition or restore it to a serviceable condition through implementation of the following:

a. By a continuous, aggressive program to include testing, servicing, repairing, rebuilding, reclamation, inspection, and classification as to serviceability.

b. By providing the supply and maintenance action required to keep a supported unit in the required state of readiness to perform its mission.

c. By performing maintenance at the lowest category capable of accomplishing the task in order to repair as soon as possible all unserviceables.

9-3. Responsibilities

a. Maintenance is a command responsibility. Every individual within the army structure performs maintenance of some form. However, to maintain all equipment and stocks in the prescribed manner requires extensive effort and command emphasis at all levels.

b. Department of the Army publications (AR's, TM's, TB's, SB's, FM's, etc.,) provide policies, standards, and technical information. Tables of Organization and Equipment (TOE) contain descriptions of missions, capabilities, equipment authorized and special instructions for each type of unit. The TOE designation will determine the category of maintenance a unit is authorized to perform. (In addition, a mission statement is normally furnished each unit by a higher headquarters defining the maintenance each unit is authorized to perform.) Commanders are responsible for the implementation and enforcement of all maintenance plans, policies, and directives within their capability.

c. Within a theater of operations, the theater army ammunition officer has staff responsibility for the implementation of DA standards of serviceability for all Class V materiel within the theater. He prepares plans and policies for the modification, maintenance, and preservation of Class V materiel in accordance with DA policies. He monitors the quality assurance program for Class V items within the theater. Ammunition maintenance plans and policies within the field army are received and directed through command channels.

d. Special Ammunition and Guided Missile Maintenance organizations are responsible for the performance of Direct Support, General Support, and Depot Maintenance.

(1) Special Ammunition Companies are provided the skills, to include tools and equipment, consistent with the category of maintenance for which they are responsible. They perform maintenance on special ammunition projectiles, warheads of missiles, atomic demolition munitions, test equipment, and special weapon peculiar handling equipment required in support of these items to include maintenance calibration. They also provide for the surveillance, inspection, and maintenance of explosive components of missile bodies and large rockets with assistance from guided missile maintenance units.

(2) Guided missile maintenance elements perform maintenance on all nonexplosive (Class VII & IX) components of guided missile systems to include ground control equipment. They also provide assistance to special and conventional general support ammunition units in the removal and replacement of warhead sections and explo-

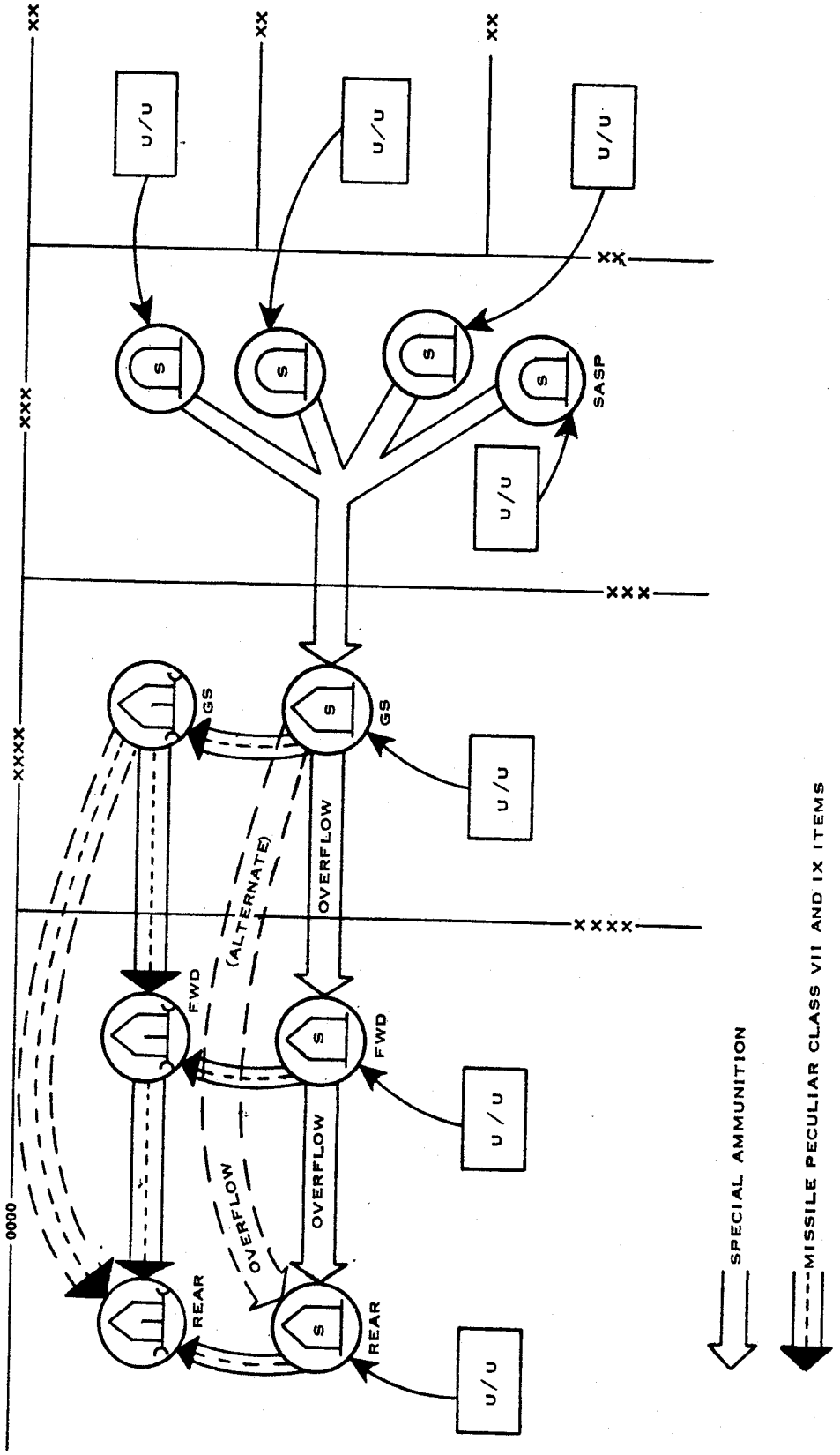


Figure 9–1. Maintenance and evacuation channels for special ammunition and related Class VII & IX items.

sive components of missile bodies and large rockets.

e. The maintenance and evacuation flow of special ammunition and related Class VII and IX items is depicted in figure 9–1.

9–4. Maintenance Operations

a. General. The operation of special ammunition support units encompasses several very distinct but interrelated activities. The relative importance of each of these activities will differ between like units and will be dependent on the support mission. The major maintenance related activities which may be performed within a special ammunition support unit are:

(1) Storage, Handling, and Transportation.
(2) Technical Inspections.
(3) Repair Parts and Materiel Management.
(4) Shop Operations.
(3) Repair Parts and Materiel Management.
(4) Shop Operations.
(5) Evacuation.
(6) Operations or Control Section.
(7) Maintenance and Operations Records.
(8) Technical Assistance Service.
(9) Contact Team Service.
(10) Maintenance Float.
(11) Quality Control.

b. Storage, Handling, and Transportation.

(1) The requirements for storage, handling, and transportation are continuous. All issues, receipts, shop operations, and some of the different types of inspections employ one or more of these activities.

(2) The same degree of expertise must be demanded of personnel employed in storage, handling, and transportation of special ammunition as is demanded of the maintenance technicians. System peculiar Technical Manuals and Ordnance Corps Drawings will specify storage data, special handling instructions, and loading procedures for all current modes of transportation to include aircraft and helicopters.

(3) Operators and organization maintenance personnel are required to maintain all equipment in a serviceable condition. Materiel handling equipment, vehicles, and handling gear will be inspected on a continuous basis to insure there are no deficiencies which may render them unsafe. A DD Form 626, Highway Inspection Report, will be initiated on every vehicle transporting any explosives. All handling equipment (slings, tie down devices, hoists, beams, forklifts, wreckers, etc.,) must be periodically load tested or proof tested in accordance with applicable Technical Bulletins.

c. Technical Inspections. Special ammunition, due to its inherent characteristics requires a strictly controlled, highly technical system of inspections. Inspections are used by commanders as part of their quality assurance program to insure reliability is not degraded. Most inspections on stocks are performed on a periodic basis. These inspections should be scheduled in such a manner that when possible, one or more scheduled inspections can be performed on an item at a time. Categories of technical inspections commonly performed on special ammunition are:

(1) *Initial Receipt Inspection.* This is an inspection performed on materiel received from the vendor to certify the materiel to the stockpile.

(2) *Receipt Inspection.* This inspection is performed on materiel received for any purpose except repair or rebuild, from any source other than the vendor. Its purpose is to determine, after shipment, the suitability of materiel for retention in the stockpile.

(3) *Partial Storage Monitoring.* This scheduled inspection is performed on materiel in storage to observe the effects of environment and certify whether the materiel is suitable for retention in the stockpile or is to be rejected for a more detailed inspection.

(4) *Periodic Inspection.* This inspection is performed on material that is scheduled for recertification and at time intervals as required by instructions contained in system peculiar TM's. Its purpose is to determine the suitability of the materiel for return to or retention in the stockpile.

(5) *Pre-issue Inspection.* This inspection as required by the system peculiar TM's.

(6) *Stockpile Reliability Inspection.* This inspection is performed to determine the condition of a sample at the time it is selected and removed from the stockpile to be subjected to the Army Nuclear Weapons Stockpile Reliability Test Program.

(7) *Maintenance Shop Inspections.* Normal maintenance shop inspection practices are applied to each special ammunition item job ordered DA Form 2407 (Maintenance Request) to a DS or GS shop. Usually the item will have been found unserviceable by a using unit or through one of the above types of inspections.

(*a*) *Initial Inspection:* Upon receipt of a special ammunition item in a shop, a qualified inspector determines extent and nature of repair required. He determines repair parts requirements.

(*b*) *In-Process Inspection:* Inspections conducted on special ammunition items to insure that there are no deviations from standards or unsafe practices allowed during a maintenance function.

(*c*) *Final Inspection:* After repair work has been completed, a final inspection is conducted to determine whether repairs have been performed satisfactorily. This inspection involves visual checks, checks with test instruments, records checks, and special checks as determined by the appropriate Technical Manuals.

d. Repair Parts and Materiel Requirements.

(1) Maintenance operations are dependent on repair parts and materiel availability. Repair part stock records procedures and controls must be meticulously executed in accordance with AR 711–16 and local implementing instructions. Requirements for parts are generated by using units, shop operations, and in the case of GS units, by the DS units they support.

(2) Many maintenance problems can be alleviated by support units if inspectors are allowed to requisition those repair parts and materiel which they anticipate using in conjunction with scheduled maintenance operations or inspections. Based upon the inspector's anticipated requirements, the support units can make their needs known to the ICC so that repair parts and materiel are available at the time the scheduled maintenance or inspection is performed. This practice alleviates the situation of having large quantities of items awaiting parts in the support shops. After all repair work is completed, unused repair parts and materiels will be turned in by the support unit as excess.

e. Maintenance Shop Operations.

(1) "Maintenance Shop" is an all inclusive term used to describe collectively all of the facilities of the unit that are directly involved in the performance of maintenance and production control.

(2) The activities found in a maintenance shop include shop office, maintenance area(s) or bay(s), shop supply, inspection section, production control, tool room and paint bay. The effective management of these activities is the responsibility of the shop officer.

(3) Quality control personnel will also be present in the maintenance shop to monitor operations. These quality control personnel should be directly responsible to the Commanding Officer.

(4) The operations of a maintenance shop are described in detail in FM 9–59. Shop operations described therein must be molded together with the safety, security, storage, handling, and transportation requirements of special ammunition.

f. Evacuation.

(1) Due to the hazardous nature of complete rounds and explosive components, unserviceable special ammunition is always evacuated through special ammunition channels. Little or no maintenance will be accomplished by DS level units. Rather, DS units will receive unserviceables from using units and evacuate the round or component to the GS level for further evacuation or, when possible, for repair and return to stock. Using units will be issued a serviceable round or component by the DS unit in exchange for their unserviceable like item.

(2) The GS unit upon receipt of an unserviceable item of special ammunition will inspect and determine extent of repairs required. When possible they will repair it and return it to stock. If repair is impossible, the item will be evacuated further.

g. Operations or Control Section. A GS Special Ammunition Company will have an Operations or Control section. This Section is responsible for planning and controlling maintenance shop activities, storage and handling operations, stock status records, and status reports as required, repair parts and materiel requirements, inspection of stocks on hand, maintenance float management, emergency destruction plans, and NAIC plans and procedures. The operations/control section will also control the usage and composition of the members of the Technical Assistance and contact teams. This section will generally have operational control of quality control personnel. Other function of the operations/control section may include the operation of a classified documents section and a communications section containing the units cryptographic equipment.

h. Maintenance and Operational Records.

(1) Maintenance records and operational records will be prepared, maintained, and submitted in accordance with the Army MMS (Maintenance Management System) procedures prescribed in

TB 9-1100-803-15, and system peculiar Technical Manuals. (Additional status reports and/or records may be required by local commanders.)

(2) Records and reports most commonly used include:

(*a*) *DA Form 2406: Materiel Readiness Report.* This report is required and utilized by all levels of command. It provides the Department of the Army with data on the readiness of selected items, including missile systems, and is prepared and submitted in accordance with TM 38-750. Field commanders also use this report for collection of materiel readiness data and may designate other items for inclusion in addition to those items required by the Department of the Army. Information contained in reports initiated by supported units has a direct and significant bearing on maintenance operations. Arrangements should be made with the appropriate command element to provide their supporting maintenance elements with copies of these reports. Supporting units should analyze such reports and take any action that is appropriate and forward reports to their higher headquarters together with information as to action or recommendations relating to problem areas indicated.

(*b*) *DA Form 2407: Maintenance Request.*

1. This form, in addition to its use for requesting maintenance service, is used for submitting equipment improvement recommendations (EIR's) and to report accomplishment of retrofits and modification work orders in accordance with TM 38-750. EIR's are submitted to national maintenance points in accordance with TM 38-750. EIR's also provide commanders with a steady output of product improvement information which can be utilized to identify defective materiel and to effect improvement in utilization, maintainability, and reliability of equipment.

2. Control of the progress of retrofit and equipment modification programs is a matter of prime concern to field commanders and commodity managers. High priority modification/retrofits must be completed at the earliest practicable date. Normal priority modifications are usually to be accomplished when items come into maintenance shops for repair.

(*c*) *DD Form 1487: DOD Materiel Adjustment Document.* This form is used by ammunition storage installations to report changes in the condition of ammunition items; e.g., a change to or from serviceable status. The information reported is utilized by the maintenance manager to determine the current status of serviceability of conventional ammunition stocks, as the basis for planning, scheduling, and control of maintenance programs, and to effect disposition of unserviceable, uneconomically reparable, and obsolete items.

(*d*) *Special ammunition status reports.* Changes in condition of nuclear weapons and guided missiles/large rockets are reported in accordance with JCS Pub 6, Vol II, and AR 742-10, respectively. Upon change to unserviceable status, reports will contain a brief description of the deficiency, the probable cause, and a listing of the defective or missing major components. They should also indicate any action taken to restore the items to a serviceable condition.

(*e*) *Missile and Rocket Equipment Report (Reports Control Symbol AMC-139).* The AMC-139 Report is submitted on missile and rocket material, including the associated equipment. Detailed instructions may be found in AR 750-40.

(*f*) *Inspection Record Card (IRC).* The purpose, usage, preparation, and submission of the IRC is contained in TM 39-35-7.

(*g*) *SC Form 5700-A, Pressure Test Record (PTR).* The purpose, usage, preparation, and submission of the PTR is contained in TM 39-35-7.

(*h*) *DA Form 2028, Recommendation for Change to DA Publication.* Discrepancies contained in manuals, drawings, specifications or the documentation will be reported on this form.

i. Technical Assistance Service.

(1) Technical Assistance is the service of providing instruction and technical guidance to supported units to enable them to perform their missions in a more efficient manner. This service encompasses both maintenance and supply functions, and has the objective of insuring the correct interpretation and uniform application of procedures to improve conditions and conserve materiel. When rendered in a prompt and effective manner, the utilization of technical assistance services should yield:

(*a*) An enhanced relationship between supported and supporting units.

(*b*) Improved operational readiness of materiel.

(*c*) Increased operational efficiency of the supporting and supported units.

(*d*) Decreased maintenance demands on the supporting unit.

(*e*) Reduced demand for repair parts and replacement items.

(*f*) Uniform interpretation and implementation of pertinent publications and directives.

(2) Technical assistance services are accomplished through use of liaison parties, work parties, or a combination of the two.

(*a*) The liaison party is the normal method of contact between the supported and supporting units. The purpose of the liaison party is to advise supported units on matters related to the accomplishment of supply and arrange visits of work parties.

(*b*) The work party is the activity used to implement the arrangements made by the liaison party, and to conduct the necessary services for resolving any problem areas uncovered. Services are usually rendered on-site in accordance with prearranged schedules.

j. Contact Team Service.

(1) Contact team support is one-site maintenance service rendered by the supporting unit to a supported unit. These services will always involve repair operations, however they may be performed in conjunction with technical assistance services.

(2) AR 750–1 states that repairs will be accomplished on-site whenever feasible. Advantages derived from on-site maintenance are:

(*a*) Time savings resulting from not having to transport large and bulky items.

(*b*) Elimination of wear and tear resultant from transporting major items.

(*c*) Dangers inherent to the transportation of any Class V items are minimized.

(*d*) Security requirements and risks inherent to transportation of classified items are minimized.

k. Maintenance Float.

(1) Maintenance Float material consists of end items and certain components authorized by Department of the Army in apprpopriate TM's. Maintenance Float items will be placed for issue at maintenance activities as appropriate.

(2) Issue of maintenance float items will be controlled by the maintenance activity and will be governed by the operational requirements of the supported units, the complexity of repairs required, and the availability of repair parts and assemblies required to accomplish the repairs. The following priorities will be observed in issuing maintenance float items. (Different theaters may arrange priorities differently.)

(*a*) To replace items of equipment in Air Defense units to insure continuous operational readiness.

(*b*) To replace items of equipment in AR-STRIKE and other high priority units in consonance with their assigned mission.

(*c*) To replace items of equipment in low priority units for the replacement of unserviceable, uneconomically repairable items.

(3) The turn-in unserviceable items and issuance of maintenance float items are supply transactions. The maintenance float will be controlled in accordance with AR 711–16.

l. Quality Control.

(1) Quality control is the function of management relative to all procedures, methods, examinations, and tests required during procurement, receipt, maintenance, and issue that are necessary to provide the user with an item of the required quality.

(2) In special ammunition units, quality control must be exercised in each of the ten activities listed above to insure exact compliance with existing reguations and technical procedures.

(3) The purpose of a quality control activity in special ammunition units is to assure the desired performance on target with each special ammunition projectile or warhead.

(4) The commander is responsible for organizing the quality control activity to achieve maximum utilization. He must also insure that quality control personnel are allowed to independently evaluate and determine, without influence or coercion, whether or not quality standards are being achieved throughout the unit.

(5) Quality control personnel will be directly responsible to the unit commander. For operational purposes only, they may be controlled by the operations or control section; however this does not change the relationship between quality control personnel and commander.

(6) Personnel selected to fill quality control positions must be of the highest integrity and professional competence.

9–5. Maintenance Management

a. General. Maintenance management is the application of all available resources in the most

judicious manner to maintain all supported materiel in a combat-ready condition. It includes development and modification of operational procedures, as necessary; a continuous flow of timely and complete information to enable continuous assessment of status, requirements, and problem areas; realinement of missions, as necessary; supervision of operations; and the exchange of information with higher headquarters, supported units, and supporting units.

b. Functions.

(1) Maintenance management at brigade and higher command levels is normally performed on a "by exception" basis. This consists, in general, of monitoring the status of maintenance required and accomplished by subordinate elements, with particular emphasis on special ammunition and class VII and IX materiel placed in the "critical" or "controlled" category by higher headquarters.

(2) Ammunition groups more directly manage ammunition maintenance activities, to include assigning and reassigning missions to subordinate units; standardizing policies, procedures, and controls; disseminating instructions and guidance to group elements, and coordinating with higher and lateral commands. Management functions are exercised by personal observation of activities, through the use of reports (either written or oral), and by the review of ammunition maintenance data received. Management actions include the establishment of programs and priorities, conducting technical inspections, recommending command action by higher headquarters when reports indicate inadequacy of maintenance supply support, and reporting through tactical commanders when maintenance workloads are aggravated by user abuse of equipment or lack of organizational maintenance.

(3) Maintenance management is directly exercised by the ammunition battalion with staff responsibility for maintenance and control vested in the materiel officer. The materiel officer coordinates quality assurance and quality control activities of the battalion. He is assisted by maintenance personnel who are specialized in the technical aspects of ammunition maintenance and maintenance supply.

(4) The battalion materiel officer, before he can effectively apply available resources, must evaluate all aspects of the ammunition maintenance program. In so doing, he must weigh strengths and weaknesses and isolate those areas in which problems exist or are anticipated. When a problem area is recognized, factors responsible for it or contributing to it, must be determined and appropriate courses of action taken. The most valuable management data is obtained by personal contact and observation. Other valuable data is available from inspection reports and maintenance records. In the case of supported units most of these records and reports are submitted through command channels; therefore arrangements are usually made for the supporting maintenance unit to be provided copies of extracts so that appropriate action may be taken.

(5) The sources of information from which existing or impending problem areas may be identified by the materiel officer may be classified as internal and external. Internal refers to the information obtained and analyzed by the materiel section. This information stems from staff visits and inspections made by personnel of the materiel section. External sources include higher headquarters, supported and supporting units, and battalion units. From external sources, the materiel officer receives information on problem areas that already exist or symptoms indicating potential problems. Proper utilization and analysis of sources of information received routinely or on an "as required" basis will minimize complaints from supported units; therefore, the materiel section must have the capability to identify problem areas and to react swiftly when reports or records contain indicators of trouble.

c. Collection and control of maintenance data.

(1) The data described in the preceding paragraphs is used to identify maintenance requirements and to ascertain the scope and status of the ammunition maintenance effort in order to properly schedule, conduct, and control the maintenance required. However, the time dissipated in collection, detracts from the time available to manage. For this reason, every effort should be made to centralize the collection effort and to provide rapid dissemination of usable data within each command and between all command levels.

(2) The FASCOM and CSB maintenance data collection activity should provide periodic listings of unserviceable ammunition items by storage location and by condition reservation code. A similar listing should be provided to indicate materiel requiring retrofit or modification. The listing should show: serial numbers (if applicable) of the affected item, the retrofit or modification(s) required, urgency of application, and the quantity completed. These listings should be disseminated to FASCOM and CSB with appro-

priate extracts furnished to ammunition groups, battalions, and companies. The FASCOM data center will also provide feedback on ammunition maintenance data from U.S. Army Munitions Command, U.S. Army Missile Command, and other national agencies.

d. Technical Proficiency Inspections (TPI's) and Technical Standardization Inspections (TSI's).

(1) TPI's are annually conducted special training inspections performed by the Inspector General, Department of the Army or designated major commands. The inspections are made to determine whether or not personnel of special ammunition and delivery units can conduct the operations pertinent to the units' mission. These inspections will be applied to such techniques or procedures as receipt, storage, maintenance (to include surveillance where required), assembly and disassembly, issue, transport, security, or pre-firing operations connected with delivery of special ammunition. TPI's also apply to administration, maintenance, and supply support to other units, coordination between units, and all procedures and actions required of the respective units in the stockpile-to-target sequence (TB IG–5 and AR 20–1).

(2) Similar inspections, called technical standardization inspections (TSI's), are periodically conducted by the Inspector General, Field Command Defense Atomic Support Agency (DASA).

CHAPTER 10

SECURITY

10–1. General

a. Positive security measures must be taken at every echelon to deny the enemy information related to special ammunition. These measures include: rigid and accurate accounting and control procedures for all classified information and materiel, a positive system of verifying security clearances of personnel, and the aggressive implementation of the Army policy of granting access to classified information or materiel only on a strict and valid "need-to-know" basis. The physical security, organization and employment of security forces, area and installation defense, and other subjects relative to a complete security effort are covered within this chapter.

b. Security regulations for the safeguarding of classified materiel and documents are contained in AR's 190–3, 190–11, 190–60, 380–5, 380–6, 380–20, 380–40, 380–41, 380–55, 380–86, and 380–150. High security classifications and restricted data controls are applied to many of the special ammunition items and related literature. FM 19–30 furnishes guidance for the implementation of physical installation security.

10–2. Physical Ssecurity

Security measures must be applied to all phases of requisition, receipt, issue, storage, and shipment of classified ammunition. Measures for security of administrative areas, installations, activities, and lines of communications are essential for uninterrupted logistical support of combat operations. Maximum use of passive security measures should be a matter of policy for special ammunition units. Local security features should not render the purpose of ammunition sites obvious. Overall security plans should be devised in the early stages of planning so that security measures are compatible with operational requirements.

10–3. Security Inspections

Responsible commanders will conduct physical security inspections of installations to insure that security measures and procedures are adequate and are being followed. These inspections will include thorough reconnaissance, study, and analysis of the installation and its operation so that all security hazards or deficiencies may be noted and corrected. Inspections should be conducted as often as required by established security regulations and procedures.

10–4. Military Intelligence (MI) Corps Liaison

An active program of liaison and cooperation with local Military Intelligence units is essential in maintaining an effective security program. The MI units will be in a position to warn the company commander of the presence of known or suspected enemy agents in the area. It can also identify local activities or business establishments that are used, or suspected of being used, as a front or cover for such enemy agents. Additionally, the MI units will be capable of assisting the company commander by pointing out weaknesses in the local security program, expediting security clearance investigations, orienting personnel on security hazards, and conducting investigations or security violations. All personnel must be thoroughly indoctrinated to report any attempt by unauthorized personnel to obtain information having intelligence value.

10–5. Security Clearances

a. Special care will be exercised at all echelons in the selection of personnel for assignment to special ammunition units. Particular attention will be given to their loyalty, integrity, and trustworthiness. As a general guide, security clearances will be equal to the classification of the materiel concerned and will be obtained in accordance with the procedures in AR 604–5.

b. All organizations and activities assigned a special ammunition mission must meet the requirements set forth in AR's 50–3 and 611–15 for selection, retention, and security clearances for personnel in special ammunition duty positions, or in command/control positions, as applicable.

c. Security plans established by the commander

should contain the following minimum requirements:

(1) Access to security areas is based upon possession of the required security clearance and need-to-know.

(2) All personnel assigned to the following nuclear weapons duty positions in special ammunition units must have the indicated clearances (AR 50–3).

(*a*) Critical—Secret or higher with background investigation (BI).

(*b*) Limited—Secret with National Agency Check (NAC) and BI pending.

(*c*) Controlled—Secret with NAC.

(3) All courier officers who accompany shipments of special ammunition must possess a security clearance equal to or higher than the classification of the materiel being escorted.

(4) All officer personnel of special ammunition units must have a minimum security clearance of SECRET (TOP SECRET is recommended).

d. Installation commanders will designate security officers who are responsible for reviewing records of new personnel and visitors. Security clearances of visitors and of new personnel that indicate prior clearance will be verified in accordance with AR 604–5 and local directives. Visitors will be positively identified. Personnel not possessing prior clearance or lacking clearance of adequate degree will be processed for security clearance in accordance with AR 604–5 and local directives. (This is a continuing problem at installation level where the unit is frequently host to individuals delivering or picking up shipments or conducting inspections or staff visits.)

CHAPTER 11

SAFETY

11–1. Responsibility for Safety

The commanding officer is ultimately responsible for the safety of his establishment, and it is important that he take the same active and aggressive leadership in safety that he takes in other phases of command responsibility. In order to fulfill his responsibilities, the commander should appoint a safety officer and organize a safety council, consisting of the technical supervisory personnel of the unit. For additional information see AR 385–10, TM 9–1300–206, and TM 39–20-series manuals.

11–2. Hazards

Ammunition hazards include those of fire, flash, explosion, blast, shock, concussion, fragmentation, radiological, and chemical contamination. The principal hazard involved in the storage of ammunition in the field is fire.

11–3. Firefighting

A complete, simple firefighting plan must be prepared for ammunition supply installations. Plans should be divided into two parts; the procedures to be observed for prevention of fire and the procedures to be followed in the event of fire. All personnel must be thoroughly familiar with their respective fire stations and the proper manner of giving the alarm. They must be thoroughly trained in preventing, reporting, and extinguishing fires in accordance with the plan and with approved methods of extinguishing ammunition fires of various types. TM 5–315 and TB 385–2 are guides for fire prevention and fighting of fires involving nuclear weapons. TM 39–20–11 should be consulted for information regarding firefighting procedures for nuclear weapons and nuclear components.

11–4. Safety Clothing and Equipment

Adequate protective equipment will be worn as prescribed by the commanding officer and the use of required items will be enforced (AR 385–32, AR 700–62, TM 10–277, FM 21–40).

11–5. Safe Handling Practices

Ammunition and explosives will be handled under the direct supervision of a competent person who thoroughly understands the hazards and risks involved. Ammuntion (particularly special ammunition) can be rendered unserviceable and in many instances unsafe by rough treatment in handling. Electronic components can be damaged so that a weapon or missile fails to check out electrically.

11–6. Missile and Heavy Rocket Propellant Hazards

Various liquids, gases, and solids are used to propel long-range rockets and missiles. The inherent fire, explosion, and toxic hazards and the increasing quantities being used have necessitated the formation of standards for their safe handling and storage. The physical and chemical properties of fuels and oxidizers and the discussion of the individual products give some indication of their hazards. Some are highly flammable liquids which burn intensely. Once a container is ruptured the fire spreads rapidly. Under certain conditions, these liquids may give off large quantities of flammable or toxic gas or vapor which in certain concentrations become explosive mixtures and thus present special fire protection problems. Others may be compressed or liquefied gases stored under pressure which present special problems through release of large quantities of flammable or toxic gases. Still others may be considered as explosives. From the above, it can readily be seen that the product being handled involve fire, toxic, and explosion hazards or a combination of these hazards. To provide reasonable safety in storage, quantity/distance limitations have been established for various products. For details in storing and handling the various types of missile and rocket propellants, specific procedures can be found in the applicable manuals.

11–7. Accident Reporting

It is essential to the accomplishment of any safety program that at every echelon of command accidents be reported. Through such reports the causes and factors producing adverse accident

trends, unsatisfactory experience, or preventable losses can be determined. Prompt reporting of each accident is essential. For further information see AR 50–2, AR 385–40, AR 385–14, and appropriate area nuclear accident and incident control plans.

11–8. Standing Operating Procedures

Prior to starting and operation involving conventional or special ammunition, an adequate standing operating procedure will be developed and approved by the commanding officer of the activity. This standing operating procedure should include as a minimum such items as safety requirements, personnel, explosive limits, equipment designation, and location and sequence of operations. No deviation from this procedure should be permitted without the approval of the commanding officer.

CHAPTER 12

NUCLEAR WEAPONS SURETY PROGRAMS

12–1. Objectives

a. The overall goal of these programs is to assure that all army nuclear weapons are maintained in a safe, secure, environment and that these weapons detonate only when authorized and, with proper weapon performance on target.

b. This goal is set forth clearly in AR 50–1, the basic directive for nuclear weapons.

12–2. Concepts

a. Attainment of the surety objectives requires the correlation of a wide variety of Army functions; accomplishment within existing command and staff structures is a fundamental requirement. Further essentials are command emphasis to avoid complacency and routine consideration, coordination across functional and command lines, and a clear line of communication to assure prompt and effective action at the level required.

b. Surety activities require close command supervision and coordination from weapon design to expenditure in the areas of:

(1) Safety, including explosive safety and insuring strict compliance with all approved safety rules.

(2) Physical security of stocks, ancillary equipment, and documents against unauthorized access.

(3) Weapons peculiar hazards, e.g., electromagnetic radiation.

(4) Personnel reliability and clearance.

(5) Logistics, including procurement, storage, handling, transportation, technical escort, maintenance, and disposal.

(6) Operating procedures related to or having an effect on safety, security, and reliability.

c. Surety programs do not exist as a separate entity but as an integral part of the daily work performed.

d. Nuclear Weapon Accident and Incident Control (NAIC):

(1) *Explanation of terms.*

(*a*) *Nuclear Weapon accident and incident.* Any unplanned event involving a nuclear weapon that damages persons or property or may cause adverse public reaction or release of information such as public hazard, actual or implied. AR 385–40 provides a fuller definition of nuclear weapon accidents, significant incidents, and minor incidents.

(*b*) *On-scene commander.* A general officer reasonably knowledgeable about nuclear weapons who commands emergency forces and supervises all operations at the scene of a nuclear weapon accident.

(*c*) *Nuclear Accident Incident Control Officer (NAICO).* An officer, preferably field grade, designated by the commander with NAIC responsibility to represent him at the scene of significant nuclear incidents and to act as on-scene commander at accident during the absence of the appointed on-scene commander.

(*d*) *Joint Nuclear Accident Coordinating Center (JNACC).* A facility established jointly by the Atomic Energy Commission (AEC) and the Department of Defense (DOD) at Sandia Base, Albuquerque, N. Mex., to assist in providing coordinated AEC/DOD response to accidents involving nuclear weapons or components. It maintains information regarding contacts for requesting the accident response capabilities of the services.

(2) *Objective.* The objective of nuclear weapons accident and incident control is to provide measures for controlling such events when they occur. These measures are designed to secure CLASSIFIED material and to minimize hazardous effects, destruction of property, personal injury, or loss of life. In conjunction with AR 385–40, they are also designed to insure prompt and accurate reports. Policies, responsibilities and procedures for nuclear accident and incident control are set forth in AR 50–2.

(3) *Responsibility for Responding to Accidents.* Responsibilities, by areas, for command and

coordination in the event of a U.S. nuclear accident are prescribed as follows:

(*a*) *In CONUS.* The military service, or agency (DASA or the USAEC) having physical possession of the weapon at the time of the accident has responsibility. If, however, the accident becomes a domestic emergency then the U.S. Army assumes responsibility regardless of which service or agency had control. The further delegation of responsibility within Department of the Army is given in AR 50–2.

(*b*) *Within a unified command.* The designated commander of the unified command has responsibility and usually further delegates it by an appropriate directive.

(*c*) *In areas not assigned above.* The service or agency having physical possession at the time of the accident is responsible.

(*d*) *Certain other areas.* In certain areas classified assignments of responsibility are made that do not follow the above assignments.

(4) *Response to nuclear accidents or incidents.* There will be no delay in responding to requests for assistance in the event of nuclear accidents or incidents which may—

(*a*) Involve health or safety.

(*b*) Degrade any military mission.

(*c*) Reflect adversely on the United States and the U.S. military services.

The guiding principle is to respond first and then, as soon as practicable, inform higher headquarters; and if necessary, request further guidance or assistance IAW AR 385–40, paragraph 5–4*c*, and appendix A.

(5) *Release of information (see AR 360–43).*

(*a*) Prompt information action is an important function in coping with any accident or incident. In the event of a nuclear accident or nuclear incident, this importance is magnified.

(*b*) The basic limitation on the disclosure of information about nuclear weapons and materials is the need for safeguarding defense information in the interest of national defense.

(*c*) Normally the presence of either nuclear weapons or nuclear components will be neither confirmed nor denied. However, in the event of a serious accident involving a nuclear weapon, official confirmation of the presence of such weapon should be made when it will have value for public safety or for reducing or preventing widespread public alarm. Such official confirmation is needed if an accident requires evacuation of personnel, or is followed by radiation teams or other unusual activity observable by the general public which results in the generation of alarm, thus necessitating a factual, official statement of reassurance.

(*d*) Widespread alarm is likely after a serious nuclear weapon accident. Such an accident occurs when radioactive material is spread by explosion or fire. When such accidents occur within CONUS, the responsible official should promptly confirm the presence of nuclear weapons unless unusual or unforeseeable circumstances dictate to the contrary. Public information plans will provide for the subsequent release of information detailing Army response to the accident and dispelling unwarranted fears concerning the accident. These subsequent releases should be cleared through proper channels whenever the situation permits. They may give the number and type of weapon (e.g., two rocket warheads) and a general statement of the damage, but will not release classified nuclear weapon design information. Attempts to conceal the presence of nuclear weapons involved in serious accidents (explosions or release of radioactive contamination) will probably fail, thereby damaging the credibility of the Army. In such cases, a reassuring, factual release of information is the best policy.

(*e*) In case such mishap occurs in a foreign country and the public interest requires announcement of the presence of a nuclear weapon or material, such an announcement will be made only with the concurrence of the Chief of the U.S. diplomatic mission concerned.

(*f*) The courier or NAICO will have available, and may issue if necessary, copies of news releases in the format shown in AR 360–43 to quiet public alarm or to contribute to public safety.

(6) *Observers.* A limited number of observers from the military services and the Atomic Energy Commission are authorized on a reciprocal basis to be present at the scene of a nuclear accident.

(7) *Concept.* The damage and psychological impact that can result from a nuclear accident or significant nuclear incident requires that control mechanisms, plans, and stringent precautions be maintained to bring such events under control as soon as possible. The essential elements to accomplish this are as follows:

(*a*) *Directives.* Major Army commands will develop directives to identify responsibilities.

(*b*) *Planning.* NAIC planning will provide for:

1. The qualifications and method of appointment of the on-scene commander and NAICO's.

2. Technical, logistic, and administrative support for the on-scene commander and NAICO's.

3. Emergency teams.

4. Transportation sources and priorities.

5. Procedures for alerting, reporting, and executing emergency measures.

6. Initial and refresher training of all persons involved.

(*c*) *Readiness assessment.* Plans and SOP's of organizations responsible for NAIC will provide for a minimum of one rehearsal test per quarter. Major Army commands will periodically monitor tests and rehearsals.

CHAPTER 13

EMERGENCY DESTRUCTION

13–1. General

a. Destruction of special ammunition described herein, when subject to capture or abandonment in the combat zone, will be undertaken only when in the judgment of the unit commander concerned, such action is necessary in accordance with orders of or policy established by the Army Commander.

b. The conditions under which destruction will be effected are command decisions and may vary in each case, dependent upon a number of factors, such as: the tactical situation, security classification of ammunition, quantity, type, location of the ammunition items, facilities for accomplishing destruction, and time.

c. Each commander must insure that he has adequate materiel and properly trained personnel to effect emergency destruction in a minimum amount of time of all special ammunition under his control. Emergency destruction plans should be prepared in detail for fixed installations. EOD personnel will assist in preparation of the emergency destruction plan and in the training of personnel. Destruction procedures for each type of special ammunition are outlined in detail in the system peculiar Technical Manuals.

13–2. References

TM 39–50–8 will provide guidance to major commanders on the emergency destruction of nuclear weapons. TM 9–1300–206, and FM 5–25 will provide general guidelines.

APPENDIX A

REFERENCES

A-1. Army Regulations (AR)

10-16	United States Army Nuclear Weapons Surety Group.
15-22	Nuclear Weapons Accident Investigation Board (CONUS).
20-1	Inspector General Activities and Procedures.
40-14	Control and Recording Procedures: Occupational Exposure to Ionizing Radiation.
50-1	U.S. Army Nuclear Weapons Surety Program.
50-2	Nuclear Weapon Accident and Incident Control (NAIC).
50-3	Personnel Security Standards for Nuclear Weapon Duty Positions.
55-16	Movement of Cargo by Air and Surface—Including Less Than Release Unit and Parcel Post Shipments.
55-55	Transportation of Radioactive and Fissile Material Other Than Weapons.
55-203	Movement of Nuclear Weapons, Nuclear Components, and Related Classified Nonnuclear Materiel.
55-228	Transportation by Water of Explosives and Hazardous Cargo.
55-355	Military Traffic Management Regulation.
59-2	Special Air Mission Procedure.
59-8	Military Airlift Command—Requirements Submissions, Space Assignments and Allocations, and Priorities.
75-1	Malfunctions Involving Ammunition and Explosives.
75-14	Responsibilities for Explosive Ordnance Disposal.
75-15	Responsibilities and Procedures for Explosive Ordnance Disposal.
75-85	Authority to Waive Ammunition and Explosive Quantity-Distance Safety Standards.
95-27	Operational Procedures for Aircraft Carrying Dangerous Materials as Cargo.
95-55	Nuclear Weapon Jettison.
190-11	Physical Security Standards for Protection of Weapons and Ammunition.
190-13	Physical Security.
190-60	Physical Security Standards for Nuclear Weapons.
220-1	Unit Readiness.
310-25	Dictionary of United States Army Terms.
310-50	Authorized Abbreviation and Brevity Codes.
360-43	Information Guidance—Nuclear Accidents and Nuclear Incidents.
380-5	Safeguarding Defense Information.
380-6	Security, Automatic, Time-phased Downgrading and Declassification System.
380-20	Restricted Areas.
(C)380-40	Department of the Army Policy for Safeguarding COMSEC Information.
380-41	Control of COMSEC Materiel.
380-55	Safeguarding Defense Information in Movement of Persons and Things.
380-150	Access to and Dissemination of Restricted Data.
385-10	Army Safety Program.
385-14	Accident/Incident Reporting—Military Shipments of Explosives and Dangerous Articles by Commercial Carriers.

385–25	Studies and Reviews, Nuclear Weapons Systems Operational Surety Program.
385–30	Safety Color Code Markings and Signs.
385–32	Protective Clothing and Equipment.
385–40	Accident Reporting and Records.
385–41	U.S. Army Accident Codebook.
385–42	Investigation of NATO Nation Aircraft/Missile Accidents-Incidents.
604–5	Clearance of Personnel for Access To Classified Defense Information and Material.
611–15	Selection, Assignment, and Retention Criteria for Personnel in Nuclear Reactor Positions, Nuclear Weapons Positions, and Command Control Positions.
700–1	Maintenance, Distribution, and Use of Supply Management Data Army Master Data File.
700–4	Supply and Maintenance Technical Assistance Program.
700–15	Preservation-Packaging, Packing and Marking of Items of Supply.
700–22	Worldwide Ammunition Reporting System (WARS) Reports Control Symbol CSGLD–1322(R1)(MIN).
700–30	Stockpile-to-Target Sequences for Army Nuclear Weapons.
700–52	Licensing and Control of Sources of Ionizing Radiation.
700–64	Radioactive Commodities in DOD Supply Systems.
(O)700–65	Nuclear Weapons and Nuclear Weapons Materiel.
700–71	Nuclear Weapons Storage Space and Facilities Report.
700–86	Ammunition Surveillance and Quality Control Management.
710–8	Nonnuclear Ammunition Comat Rates.
710–50	Intensive Management of Secondary Items.
711–5	Army Equipment Status Reporting System Unit, Organization, or Activity Equipment Status Reporting (Materiel Readiness).
711–16	DSU/Installation Stock Control and Supply Procedures.
711–25	Stockage of Supplies and Authorized Stockage Lists.
711–80	Army Supply Status Reporting System Oversea Depot Stock Status Report.
725–50	Requisitioning, Receipt, and Issue System.
735–35	Supply Procedures for TOE and TDA Units or Activities.
742–10	Ammunition Inspection and Lot Number Reports.
750–1	Maintenance Concepts.
750–25	Army Metrology and Calibration System.
(C)750–40	Missile and Rocket Equipment Report (U).
755–15	Disposal of Unwanted Radioactive Material.
780–62	Storage Space Utilization and Occupancy Report.

A–2. Field Manuals (FM)

3–15	Nuclear Accidents Contamination Control.
5–15	Field Fortifications.
5–25	Explosives and Demolitions.
5–26	Employment of Atomic Demolition Munitions.
9–6	Ammunition Service in the Theater of Operations.
9–15	Explosive Ordnance Disposal Unit Operations.
9–16	Explosive Ordnance Reconnaissance.
9–59	Missile Support Unit Operations.
11–23	U.S. Army Strategic Communications Command (THEATER).
11–125	Field Army Signal Communications.
19–30	Physical Security.
21–40	Chemical, Biological, Radiological and Nuclear Defense.

21–41	Soldiers Handbook for Defense Against Chemical and Biological Operations and Nuclear Warfare.
29–20	Maintenance Management in Theaters of Operations.
29–22	Maintenance Battalion and Company Operations (Nondivisional).
31–45	Explosive Ordnance Disposal Service.
54–1	The Logistical Command.
54–2	The Division Support Command and Separate Brigade Support Battalion.
54–3	The Field Army Support Command.
54–4	The Support Brigade.
54–5–1 (Test)	The Supply and Maintenance Command.
54–6	The Area Support Command.
54–7	The Theater Army Support Command.
54–8 (Test)	The Administrative Support, Theater Army (TASTA–70).
55–15	Transportation Reference Data.
61–24	Division Communications.
100–5	Operations of Army Forces in the Field.
100–10	Combat Service Support.
101–5	Staff Officers Field Manual: Staff Organization and Procedure.
101–10–1	Staff Officer's Field Manual: Organizational, Technical, and Logistical Data—Unclassified Data.
101–10–2	Staff Officer's Field Manual: Organizational, Technical, and Logistical Data—Extracts of Nondivisional Tables of Organization and Equipment.
101–10–3	Staff Officer's Field Manual: Organizational, Technical and Logistical Data —Classified Data (U).
101–31–1	Staff Officer's Field Manual, Nuclear Weapons Employment, Doctrine, and Procedures.

A–3. Supply Catalogs (SC)

(O)C1100–CR	Atomic Weapons Materiel.
1305/30–IL	FSC group 13—Ammunition and Explosives: Class 1305—Ammunition through 30MM; Class 1310–Ammunition, over 30MM up to 75MM; Class 1315–Ammunition, 75MM through 125MM; Class 1320—Ammunition, over 125MM; Class 1325–Bombs; Class 1330–Grenades.
1336/38–IL	Department of the Army Supply Catalog Identification List, Group 13, Ammunition and Explosives, FSC 1336, 1337 and 1338.
1340/98–IL	Identification list: FSC group 13—Ammunition and explosives; Class 1340 —Rockets and rocket ammunition; Class 1345—Land mines; Class 1350 —Underwater mine inert components; Class 1351—Underwater mine explosive components; Class 1355—Torpedo inert components; Class 1356—Torpedo explosive components; Class 1360—Depth charge inert components; Class 1361—Depth charge explosive components; Class 1365—Military chemical agents; Class 1370—Pyrotechnics; Class 1375 —Demolition materials; Class 1376—Bulk explosives; Class 1377—Cartridge and propellant actuated devices and components; Class 1380—Military biological agents; Class 1385—Explosive ordnance disposal tools, surface; Class 1386—Explosive ordnance disposal tools, underwater; Class 1390—Fuzes and primers; Class 1395—Miscellaneous ammunition; Class 1398—Specialized ammunition handling and servicing equipment.
1400–IL	Department of the Army supply catalog identification list, group 14, guided missile, FSC 1410, 1420, 1430, 1440, and 1450.

A–4. Technical Manuals (TM)

3–220	Chemical, Biological, and Radiological (CBR) Decontamination.

3–240	Field Behavior of Chemical, Biological and Radiological Agents.
5–315	Firefighting (Structures, Aircraft, Petroleum, and Nuclear Material) and Rescue Operations in Theaters of Operations.
9–1300–206	Care, Handling, Preservation, and Destruction of Ammunition.
10–277	Protective Clothing Chemical Operations.
38–250	Packaging and Handling of Dangerous Materials for Transportation by Military Aircraft.
38–750	The Army Maintenance Management System.
38–750–1	Maintenance Management: Field Command Procedures.
(S)39–0–1	Numerical Index to Joint Atomic Weapons Publications (U).
(C)39–0–1A	Numerical Index to Joint Atomic Weapons Publications (Army Supplement) (U).
39–4–1	Glossary of Nuclear Weapons Materiel and Related Terms.
(S)39–4–1A	Glossary of Nuclear Weapons Materiel and Related Terms (Supplement) (U).
(S)39–5–5	Stockpile Reports, DOD Storage, Storage Activities (U).
39–5–6	Service Accountability for AEC-Produced War Reserve Atomic Weapons Material.
(S)39–20–1	Explosives and Weapons Safety (U).
(SRD)39–20–3	Nuclear Safety Criteria (U).
39–20–5	Plutonium Contamination Standards.
39–20–6	Disposal of Radioactive Waste.
(S)39–20–7	Tritium Safety and Air Monitoring Requirements (U).
(C)39–20–11	Precautionary Measures Involving Aircraft Carrying Hazardous Cargo (U).
(S)39–20–12	Transportation and Storage Safety for Atomic Weapons and Components (U).
(CRD)39–35–7	Inspection Records (U).
(SRD)39–40–1	Field Modernization and Retrofit Orders (U).
39–45–51	Transportation of Nuclear Weapons Material.
(SRD)39–45–51A	Transportation of Nuclear Weapons Material (Supplement) (U).
(S)39–50–8	Emergency Destruction of Nuclear Weapons (U).
(O)39–100–1	Supply Management of Atomic Weapons Material.
39–100–5	Atomic Weapons Materiel Shipping Guide.
55–602	Movement of Special Freight.

A–5. Technical Bulletin (TB)

IG–5	Inspector General Technical Proficiency Inspection.
(CRD)9–1100–803–15	Army Nuclear Weapons Equipment Records and Reporting Procedures (U).
(SRD)9–1100–805–25	Compatibility Grouping and Explosive Hazard Classification of Nuclear Weapons (U).
9–1100–807–15	Loading, Tiedown, and Unloading of Nuclear Weapon Shipping and Storage Containers on Tactical Vehicles.
(CRD)9–1100–809–15	Color Coding and Identification Marking of Nuclear Weapons Training Material, and Associated Containers and Warhead Hand Trucks (U).
385–2	Nuclear Weapons Firefighting Procedures.
705–25	Field Calibration Procedures.
750–236	Calibration Requirements for the Maintenance of Army Materiel.

A–6. Tables of Organization and Equipment (Pre-TASTA–70)(TOE)

9–17G	Ordnance Ammunition Direct Support/General Support Company.
9–22G	Headquarters and Headquarters Company, Ordnance Group, Ammunition, Direct Support/General Support.

9–32G	Headquarters and Headquarters Company, Ordnance Ammunition Brigade.
9–47G	Ordnance Special Ammunition Direct Support Company.
9–86G	Headquarters and Headquarters Company, Ammunition Battalion, Direct Support/General Support.
9–87E	Ordnance Special Ammunition General Support Company.
9–227E	Ordnance Guided Missile General Support Company.
9–247G	Ordnance Guided Missile Direct Support Company.
9–500D-Series	Ordnance Service Organizations.
9–510T-Series	Ordnance Specialized Service Departments.
19–97G	Military Police Physical Security Company.
29–227G	The Army Calibration Company.

A–7. Tables of Organization and Equipment (TASTA–70)(TOE)

9–22H	Headquarters and Headquarters Company, Ammunition Direct Support/General Support Group.
9–36G	Headquarters and Headquarters Company Ordnance Battalion, Ammunition, Direct Support/General Support.
9–38G	Ordnance Company, Ammunition, Direct Support/General Support.
9–47G	Ordnance Special Ammunition, Direct Support Company.
9–48G	Ordnance Special Ammunition Company, General Support/Direct Support.
9–59G	Ordnance Company Guided Missile General Support Maintenance.
9–520G	Explosive Ordnance Disposal Detachments.
9–530G	Ammunition Supply and Renovation Detachments.
9–540G	Nuclear Weapons Support Detachments.
9–550G	Rocket and Missile Support Detachments.
19–97H	Military Police Physical Security Company.
29–129G	Aircraft and Missile Repair Parts Supply Company (General Support).
29–227H	Army Calibration Company.

A–8. Joint Publication.

(C) JCS Pub 6, Vol II	Joint Reporting Structure.

A–9. Department of Defense Publications

(SRD) SFM–FC–2	Atomic Weapons Storage Facilities Manual (U).

APPENDIX B

SYSTEM PECULIAR REFERENCE GUIDE
LIST OF TECHNICAL MANUALS BY WEAPON SYSTEM

B-1. Atomic Demolition Charge XM 167/172/175 (MADM)

(CRD) TM 9-1100-226-12	Operator and Organizational Maintenance (Prefire Procedures for Employment): Atomic Demolition Charges XM167, XM172, XM175, and Coder-Transmitters XM3 and XM4 (U).
(C) TM 9-1100-226-45/1	GS and Depot Maint. (Assy, Test & Storage Procedures) XM167, XM172 & XM175 Atomic Demolition Charges; XM165 Trng Atomic Demolition Charge; XM3 & XM4 Coder-Transmitters (U).
(SRD) TM 9-1100-226-45/2	(Supplement to above) (U).
TM 55-1100-226-12-1	Air Transportability Procedures: Atomic Demolition Charge XM167, XM172, and XM175 and Remote command equipment in the U-1A Aircraft.
TM 55-1100-226-12-2	Air Transportability Procedures: Atomic Demolition Charge XM167, XM172, and XM175 and remote command equipment in the CH-34 helicopter.
TM 55-1100-226-12-3	Air Transportability Procedures: Atomic Demolition Charge XM167, XM172, and XM175 and remote command equipment in the CH-37 helicopter.
TM 55-1100-226-12-4	Air Transportability Procedures: Atomic Demolition Charge XM167, XM172, and XM175 and remote command equipment in the CH-21 helicopter.
TM 55-1100-226-12-5	Air Transportability Procedures: Atomic Demolition Charge XM167, XM172, and XM175 and remote command equipment in the UH-1A or UH-1B helicopter.
TM 55-1100-226-12-6	Air Transportability Procedures: Atomic Demolition Charge XM167, XM172, and XM175 and remote command equipment in U.S. Air Force C-7A aircraft.
TM 55-1100-226-12-7	Air Transportability Procedures: Atomic Demolition Charge XM167, XM172, and XM175 and remote command equipment in the U-6A aircraft.

B-2. Atomic Demolition Charge XM129 (SADM)

(CRD) TM 9-1100-205-12	Operator and Organizational Maintenance Manual: XM129E1, XM129E2, XM159E1 and XM159E2 Atomic Demolition Charge; XM130E1 Training Atomic Demolition Charge (U).
(CRD) TM 9-1100-205-35	Field and Depot Maintenance Manual (Assembly, Test, and Storage Procedures) Atomic Demolition Charge XM129E1, XM129E2, XM159E1, XM159E2 and Training Atomic Demolition Charge XM130E1 (U).
(C) TM 55-1100-205-12-2	Air Transportability Procedure: Atomic Demolition Charge XM129E1, XM129E2, XM159E1, and XM159E2 in the CH-34 Helicopter (U).
(C) TM 55-1100-205-12-4	Air Transportability Procedures: Atomic Demolition Charge XM129E1, XM129E2, XM159E1, and XM159E2 in the CH-21 Helicopter (U).
(C) TM 55-1100-205-12-6	Air Transportability Procedures: Atomic Demolition Charge XM129E1, XM129E2, XM159E1, and XM159E2 in U.S. Air Force C-7A Aircraft (U).

(C) TM 55–1100–205–12–8	Air Transportability Procedures: Atomic Demolition Charge XM129E1, XM129E2, XM159E1, and XM159E2 in the U–6A Aircraft (U).
(C) TM 55–1100–205–12–10	Air Transportability Procedures: Atomic Demolition Charge XM129E1, XM129E2, XM159E1, and XM159E2 in the U–1A Aircraft (U).
(C) TM 55–1100–205–12–12	Air Transportability Procedures: Atomic Demolition Charge XM129E1, XM129E2, XM159E1, and XM159E2 in the CH–37 Helicopter (U).
(C) TM 55–1100–205–12–14	Air Transportability Procedures: Atomic Demolition Charge XM129E1, XM129E2, XM159E1, and XM159E2 in the UH–1B Helicopter (U).
(C) TM 55–1100–205–12–16	Air Transportability Procedures: Atomic Demolition Charge XM129, XM 129E1, XM159, XM159E1 in the OH–13 Helicopter (U).
(C) TM 55–1100–205–12–18	Air Transportability Procedures: Atomic Demolition Charge XM129E1, XM129E2, XM159E1 and XM159E2 in the O–1A Aircraft (U).

B–3. Honest John

(C) TM9–1100–200–12	Operator and Organizational Maintenance (Prelaunch Procedures): M27, M47, and M48 Atomic Warhead Sections, M72 Training Atomic Warhead Section (U).
(C) TM 9–1100–200–40/1	GS Maintenance (Assy, Test & Storage Procedures) M27, M47 & M48 Atomic Warhead Sections, M49 & M72 Training AWS (U).
(SRD) TM 9–1100–200–40/2	(Supplement to above) (U).
TM 9–1100–200–20P	Organizational Maintenance RP and STL, Warhead Sections M27, M47, and M48; M72 training and atomic warhead section.
TM 9–1340–202–12	Operator and Organizational Maintenance Manual 762-mm Rockets MGR–1A and MGR–1B Series.
TM 9–1340–202–35	Field and Depot Maintenance Manual 762-mm Rockets M31 and M50 Series.
TM 55–1100–200–20–1	Air Transportability Procedure: HONEST JOHN Warhead Section in the CH–37 Helicopter.
TM 55–1100–200–20–2	Air Transportability Procedures: HONEST JOHN Warhead Section on caster-mounted dolly in the CH–34 Helicopter.
TM 55–1100–200–12–3	Air Transportability Procedures: HONEST JOHN Warhead Section in U.S. Air Force C–7A Aircraft.
TM 55–1100–200–12–4	Air Transportability Procedures; HONESB JOHN Warhead Section on the M465 Transport Cart in the CV–2 Aircraft.
TM 55–1100–200–12–5	Air Transportability Procedures: HONEST JOHN Warhead Section on the the M465 Transport Cart in the CH–37 Helicopter.

B–4. Lance: Publications for the Lance are still in draft form; however their publication number and a description of the equipment for which they are being prepared are listed below.

TM 9–1100–485–14	XM234 WHS (X and RPSTL) (SRD)
TM 9–1336–485–12	XM188 WHS (Z and PRACTICE)
TM 9–1410–485–35	AMMO COMPONENTS

B–5. Nike Hercules

(C) TM 9–1100–250–12	Operator and Organizational Maintenance Warhead Sections M22, M23, M97 (Prefire Procedure) (Nike-Hercules Air Defense Guided Missile System) (U).
(C) TM 9–1100–250–40/1	General Support Maintenance (Assembly, Test & Storage Procedures) M22, M23 and M97 Atomic Warhead Sections M21 Training Atomic Warhead Section (U).
(SRD) TM 9–1100–250–40/2	General Support Maintenance (Assembly, Test & Storage Procedures) (Supplement) M22, M23 and M97 Atomic Warhead Sections; M21 Training Atomic Warhead Section (U).

TM 55–1100–250–12–2	Air Transportability Procedures for Movement of NIKE HERCULES Warhead Section in Container in U.S. Army CV–2 Aircraft.

B–6. Sergeant

(C) TM 9–1100–300–12	Operator and Organizational Maintenance (Prelaunch Procedures) XM62E2, XM62E3, XM63E2, XM63E3 Atomic Warhead Sections, XM138E6 Training AWS, M65 Practice AWS (U).
(SRD) TM 9–1100–300–34	Field Mantenance (Assembly, Test and Storage Procedures) Warhead Sections M62 and M63 Series; Warhead Sections (Training) M64- and M138-Series; Warhead Section (Practice) M65 Series; Adaption Kit M91 Series; Adaption Kit (Training) M116 Series (U).
TM 55–1100–300–12–3	Air Transportability Procedure: SERGEANT Warhead Section in XM481 Container in the CV–2 Aircraft.
TM 55–1100–300–12–4	Air Transportability Guidance: External Transport of Sergeant Warhead Section in Container by U.S. Army Helicopters.

B–7. Pershing

(C) TM 9–1100–375–12	Operator and Organizational Maintenance (Prelaunch Procedures) XM28, XM141 and XM142 Atomic Warhead Sections, XM95E1 Training AWS (U).
(SRD) TM 9–1100–375–34	Field Maintenance (Assembly, Test, and Storage Procedures) Warhead Section XM28E1, XM28E2, XM141E1, XM141E2, XM142E1, and XM142E2 and Training Warhead Sections XM70E1 and XM95E1 (U).
TM 55–1100–375–12–2	Air Transportability Guidance: PERSHING Warhead Section in U.S. Air Force C–7A Aircraft.
TM 55–1100–375–12–3	Air Transportability Guidance: External Transport of PERSHING Warhead Section in Container or on Trailer by U.S. Army Helicopters.
TM 55–1100–375–20–1	Air Transportability Guidance: PERSHING Warhead Section in CH–37 Helicopter.
TM 55–1100–375–20–2	Air Transportability Procedures: PERSHING Warhead Section in CH–47 Helicopter.

B–8. Eight-Inch Projectile

(CRD) TM 9–1100–218–12	Operator and Organizational Maintenance (Prefire Procedures): 8-inch Atomic Projectile M422; Training 8-inch Atomic Projectile M423; and 8-inch Spotting Projectile M424 (U).
(C) TM 9–1100–218–45/1	General Support and Depot Maintenance (Assembly, Test, and Storage Procedures) M422 Atomic Projectile M423 Training Atomic Projectile M424 Spotting Projectile (U).
(SRD) TM 9–1100–218–45/2	General Support and Depot Maintenance (Assembly, Test, and Storage Procedures) (Supplement) M422 Atomic Projectile M423 Training Atomic Projectile M424 Spotting Projectile (U).
(S) TM 39–N–7	Storage Inspection Procedures with IPB: 992P–Z and 992T–Z Packages (U).
(S) TM 39–N–10	Storage Inspection Procedures with IPB: 994P–W Package (U).
TM 55–1100–218–12–2	Air Transportability Procedures: 8-Inc Atomic Projectile M422 in the U–1A Aircraft.
TM 55–1100–218–12–3	Air Transportability Procedures: 8-Inch Atomic Projectile M422 in the CH–21 Helicopter.
TM 55–1100–218–12–4	Air Transportability Procedures: 8-Inch Atomic Projectile M422 in the CH–34 Helicopter.
TM 55–1100–218–12–5	Air Transportability Procedures: 8-Inch Atomic Projectile M422 in the Air Force C–7A Aircraft.

TM 55–1100–218–12–6	Air Transportability Procedures: 8-Inch Atomic Projectile M422 in the U–6A Aircraft.
TM 55–1100–218–12–7	Air Transportability Procedures: 8-Inch Atomic Projectile M422 in the CH–37 Helicopter.
TM 55–1100–218–12–8	Air Transportability Guidance: External Transport of 8-Inch Atomic Projectile, M422, by U–6A Aircraft.
TM 55–1100–218–12–9	Air Transportability Guidance: External Transport of 8-Inch Atomic Projectile, M422, by 0–1 Aircraft.
TM 55–1100–218–12–10	Air Transport Procedures: 8-Inch Atomic Projectile, M422, in CH–27 Helicopter.
TM 55–1100–218–12–11	Air Transport Procedures: 8-Inch Atomic Projectile, M422, in UH–1-Series Helicopter.
TM 55–1100–218–20–1	Air Transportability Procedures: External Transport of 8-Inch Atomic Projectile, M422, by U.S. Army Helicopters.

B–9. 155-MM Projectile

(C) TM 9–1100–204–12	Operator and Organizational Maintenance (Prefire Procedures) Projecile XM454 and Training Projectile XM455 (U).
(C) TM 9–1100–204–35	Field and Depot Maintenance Manual (Assembly, Test, and Storage Procedures) Projectile XM454 and Training Projectile XM455 (U).
TM 55–1100–204–15–1	Air Transportability Procedures: XM454 Projectile in the UH–1A or UH–1B Helicopter.
TM 55–1100–204–15–2	Air Transportability Procedures: XM454 Projectile in the CH–37 Helicopter.
TM 55–1100–204–15–3	Air Transportability Procedures: XM454 Projectile in the CV–2 Aircraft.
TM 55–1100–204–15–4	Air Transportability Procedures: XM454 Projectile in the CH–21 Helicopter.
TM 55–1100–204–15–5	Air Transportability Procedures: XM454 Projectile in the CH–34 Helicopter.
TM 55–1100–204–15–6	Air Transportability Procedures: XM454 Projectile in the OH–13 Helicopter.
TM 55–1100–204–15–7	Air Transportability Procedures: XM454 Projectile in the U–6A Aircraft.
TM 55–1100–204–15–8	Air Transportability Procedures: XM454 Projectile in the U–1A Aircraft.
TM 55–1100–204–15–9	Air Transportability Guidance: External Transport of XM454 Projectile in XM467 Container by U.S. Army Helicopters.
TM 55–1100–204–15–10	Air Transportability Guidance: External Transport of XM454 Projectile in XM467 Container by 0–1 Aircraft.
TM 55–1100–204–15–11	Air Transportability Guidance: External Transport of XM454 Projectile in XM467 Container by U–6A Aircraft.
TM 55–1100–204–20–1	Air Transportability Procedures: XM454 Projectile in XM467 Container in CH–47 Helicopter.
TM 55–1100–204–20–2	Air Transportability Procedures: XM454 Projectile in XM467 Container in UH–1D Helicopter.

B–10. Hawk

TM 9–1410–500–12/1	Operator & Organizational Maintenance Manual: Air Defense Guided Missile XMIM–23A (HAWK Air Defense Guided Missile System).
TM 9–1410–500–35/1	DS, GS, and Depot Maintenance Manual: Missile XMIM–23A and XMTM–23B Ammunition Items (HAWK Air Defense Guided Missile System).

APPENDIX C

COMPLETE ROUND DATA

MEDIUM ATOMIC DEMOLITION MUNITION XM167, XM172, XM175 ATOMIC DEMOLITION CHARGE

Component	Qy/ Rd	Qy/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Width	Height	Diameter	Phy Sec Classification
MK45 Mod 3 Warhead	1	1	1	H–815 Contr	C–1		386	16.3	42.5	24.5	28		SRD
XM96 Firing Device	1	1	1	Mtl Cntr 1 of 1	C–2		139	12.4			37	24	S
XM5 Decoder Receiver	1	1	1	Mtl Cntr 1 of 1	C–3		105	10.6			32	24	S
*XM ¾ Transmitters	1	1	1	Mtl Box	C–4		410	27.8	43	33	34		S
*WD–1 TT Tel Cable ½ mile lengths	20	1	20	M306 Reels									U

*Organic to using units.

SPECIAL ATOMIC DEMOLITION MUNITION XM129/XM159 ATOMIC DEMOLITION CHARGE

Component	Qy/ Rd	Qy/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Width	Height	Diameter	Phy Sec Classification
XM129E1/E2	1	1	1	H–913 Contr	C–5		162	13.4	35	26.2	26.6		SRD

MGR–1A HONEST JOHN

Component	Qy/ Rd	Qy/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Width	Height	Diameter	Phy Sec Classification
M3/M3A1/M3A1C Rocket Motor Assembly	1	1	1	Wooden Crate		2429	6538	263.4	239.5	38.375	49		U
or													
M3A1C/M3A2 Rocket Motor Assembly	1	1	1	Plywood Container		1683	5792	253.2	235	38	49		U
M136A1/M136A2 Fins	4	4	1	Wooden Crate		230	396	27.5	49.5	16.5	60.1		U
or	4	4	1	Plywood Container		188	354	24.75	50	15.5	53.5		U
M136AB1 Fins	4	4	1	Wooden Crate		230	402.4	27.5	49.5	16.5	60.1		U
	4	4	1	Plywood Container		188	360.4	24.75	50	15.5	53.5		U
M57 (T39E4) HE Warhead Section	1	1	1	Wooden Crate		1776	3410	199	146	44.5	53.3		U
or													
M6/M6A1 HE Warhead Section	1	1	1	M473 Plywood	C–6	1375	3000	187	140.25	44.25	52.5		C
or													
M144 HE Warhead Section	1	1	1	M473A1 (Plywood)	C–7	1350	2975	188	140.25	44.25	52.5		C
or													

MGR-1A HONEST JOHN—Continued

Component	Qty/ Rd	Qty/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Overall Dimensions (inches) Width	Overall Dimensions (inches) Height	Diameter	Phy Sec Classification
M186 HE Warhead Section	1	1	1	M473A1 (Plywood)	C-7	1350	2975	188	140.25	44.25	52.5		C
or													
M27/M47/M48 Nuclear Warhead Section	1	1	1	M480 (Steel)	C-8	1425	2663	161	134.5	40	52		SRD
				or XM480E1 (Steel)		1517	2755	179	134.5	44	52		SRD
or													
M190 Chemical Warhead Section	1	1	1	M480E2 (Steel)		1485	2725	179	134.5	44	52		U
or													
XM4E1/E2/E4 Practice Warhead Section	1	1	1	Wooden Crate		1776	3410	200.6	146	44.5	53.3		U
or													
M88 (XM38E1) Practice Warhead Section	1	1	1	Plywood Cntr		1270	2897.5	188.2	140.25	44.25	52.5		U

MGR-1B HONEST JOHN

Component	Qty/ Rd	Qty/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Overall Dimensions (inches) Width	Overall Dimensions (inches) Height	Diameter	Phy Sec Classification
M66/M66A1 Rocket Motor Assembly	1	1	1	Plywood Container		1786	4880	208	198.375	41.75	433.375		U
M6A1 HE Warhead Section	1	1	1	M473 (Plywood)	C-6	1375	3000	188	140.25	44.25	52.5		C
or													
M144 HE Warhead Section	1	1	1	M473A1 (Plywood)	C-7	1350	2975	188	140.25	44.25	52.5		C
or													
M186 HE Warhead Section	1	1	1	M473A1 (Plywood)	C-7	1350	2975	188	140.25	44.25	52.5		C
or													
M27/M47/M48 Nuclear Warhead Section	1	1	1	M480 (Steel or XM480E1 (Steel)	C-8	1425	2663	161	134.5	40	52		SRD
						1517	2755	179	134.5	44	52		SRD
or													
M190 Chemical Warhead Section	1	1	1	M480E2 (Steel)		1485	2725	179	134.5	44	52		U
or													
M88(XM38E1) Practice Warhead Section	1	1	1	Plywood Container		1270	2897.5	188	140.25	44.25	52.5		U

XM1M-23A HAWK

Component	Qty/ Rd	Qty/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Overall Dimensions (inches) Width	Overall Dimensions (inches) Height	Diameter	Phy Sec Classification
M3 (XM3E1) Missile	1	1	1	M430 (XM430) Steel		1800	3095	151	216	28.75	41.5		C

MIM 14-A NIKE HERCULES

Component	Qy/ Rd	Qy/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Width	Height	Diameter	Phy Sec Classification
Body Section Fore & Aft	1	1	1	M410 (Steel)	C-9		4618	435.5	223.5	54.75	61.75		U
Control Surfaces	4	4	1	M31 Plywood	C-10		1050	104.3	147.5	29	42.125		U
M30/M30A1 Rocket Motor w/igniter & initiators	1	1	1	Plywood	C-11	1166	3844	124.8	107.125	43.25	47.5		U
Horn Wave Guide (GS-18756, L1-L6)	2	18	1/9	Cardboard Box			25	1.5	17.5	11.25	13.25		C
Delay Lines (GS-10424, L1-L16)	1	1	1	Wood Cr			20	.8	15.5	9.25	9.25		C
APS-ET03, 25 gal	1	1	1	Steel Cyl			280	6.9	15.5	15.5	51		U
Battery, BA401/U	1-HE	4	¼-HE	Wood Cr			65	1.5	19.25	13	10.5		U
	3-NUC	4	¾-NUC										
M135 (M17, T45) HE Warhead Section w/Expl. Harness	1	1	1	M409 (Steel)	C-12	1945	3625	192.1	99.25	54.25	62		U
M22/M23/M97 Nuclear Warhead Section and	1	1	1	M409 (Steel)	C-12	1945	3068	192.1	99.25	54.25	62		SRD
XM2/M2 Static Tube	1	1	1	M75AK (2 of 5) (Steel Can)		34	37	4.6			26	17.5	U
M30A1 S&Q Device	2	20	1/10	Wood Cr	C-13		25	.6	15.5	9.26	8		U
M42/M42A1 Rocket Motor Cluster w/4 igniters or	1	1	1	Wood Cr	C-14		6520	270.7	180.375	43.5	55.625		U
M5E1/M88 Rocket Motor w/igniter and	4	1	4	M13 Crate			1883	81.5	177	25.25	31.5		U
				M13A1 Crate			1949	71.5	173.5	25	28.5		U
M2 Thrust Structure w/cluster comp	1	1	1	Wood Cr			395	40.1	38.625	38.75	46.25		U
M20 Fins, Rocket Motor Cluster	4	4	1	M32 Crate			677	54.3	62.25	29.25	51.75		U
				M39 Crate	C-15		600	45.2	51.25	29.5	51.75		U

MIM 14-B NIKE HERCULES

Component	Qy/ Rd	Qy/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Width	Height	Diameter	Phy Sec Classification
Body Section, Fore & Aft	1	1	1	M410 (Steel)	C-9		4618	435.5	223.5	54.75	61.75		U
Control Surfaces	4	4	1	M31 Plywood	C-10		1050	104.3	147.5	29	42.125		U
M30/M30A1 Rocket w/igniter and initiators	1	1	1	Plywood	C-11	1166	3844	124.8	107.125	43.25	47.5		U
Horn Wave Guide (GS-18756, L1-L6)	2	18	1/9	Cardboard Box			25	1.5	17.5	11.25	13.25		C

MIM 14-B NIKE HERCULES—Continued

Component	Qy/ Rd	Qy/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Overall Dimensions (inches) Width	Overall Dimensions (inches) Height	Diameter	Phy Sec Classification
Delay Lines (GS-10424, L1-L16)	1	1	1	Wood Cr			20	.8	15.5	9.25	9.25		C
Battery, BA472A/B/C	1-HE 3-NUC	12 12	1/12-HE 1/4-NUC	Wood Cr			172	2.8	26	18	10		U
HPU Battery BA485A/U	1	1	1	Wood Cr			90	4.1	19.75	17.1	15.25		U
M135 (M17, T45) HE Warhead Section w/Expl. Harness	1	1	1	M409 (Steel)	C-12	1945	3625	192.1	99.25	54.25	62		U
M/22M23/M97 Nuc Warhead Section and	1	1	1	M409 (Steel)	C-12	1945	3068	192.1	99.25	54.25	62		SRD
XM2/M2 Static Tube	1	1	1	M75AK (2 of 5) (Steel Can)		34	37	4.6			26	17.5	U
M30A1 S&A Device	2	20	1/10	Wood Cr	C-13		25	.6	15.5	9.25	8		U
M42/M42A1 Rocket Motor Cluster w/4 igniters or	1	1	1	Wood Cr	C-14		6520	270.7	180.375	43.5	55.625		U
M5E1/M88 Rocket Motor w/igniter and	4	1	4	M13 Crate			1883	81.5	177	25.25	31.5		U
M2 Thrust Structure w/cluster comp	1	1	1	Wood Crate			395	40.1	38.625	38.75	46.25		U
M20 Fins, Rocket Motor Cluster	4	4	1	M32 Crate			677	54.3	62.25	29.25	51.75		U
				M39 Crate	C-15		600	45.2	51.25	29.5	51.75		U

155MM HOWITZER NUCLEAR ARTILLERY PROJECTILE

Component	Qy/ Rd	Qy/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Overall Dimensions (inches) Width	Overall Dimensions (inches) Height	Diameter	Phy Sec Classification
XM454-XM454E7 Projectile	1	1	1	XM467 Mtl Contr	C-20	138	266	14.9	57	22	20.5		SRD
XM72 Prop Chg	1	1	1	M1 6A2 Mtl Cyl Contr		25	55	1.7	43	8.5	8.5		U
MK2A4 Primer	1	1125	1/1125	Wooden Box									
	1	1440	1/1440	Wooden Box			82	2	23.75	14	10.375		U
	1	2400	1/2400	Wooden Box			117	2.18	18	15.875	13.25		U
	1	2400	1/2400	Wooden Box			107	1.58	25.375	10.875	9.875		U
M82 Primer	1	500	1/500	Wooden Box			1.2	1.95	24.375	12.125	11.375		U
M2 Flash Reducer	1	400	1/400	M18 Wdn Box			56.0	1.46	13.625	13.625	13.625		U
	1	800	1/800	Wooden Box									U

XMGM-31A PERSHING

Component	Qy/ Rd	Qy/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Overall Dimensions (inches) Width	Overall Dimensions (inches) Height	Diameter	Phy Sec Classification
XM101 Propulsion Section (1st stage)	1	1	1	XM475		3361	9193	381.5	145	65	70		C
XM102 Propulsion Section 20 stage	1	1	1	XM476		3397	7365	381.5	145	65	70		C
AN/DJW-28 Guidance and Control Section	1	1	1	XM474		1765.5	2532	244	90	65	72		C
EBW Case Vent System Serial #0030-0312	1	1	1	XM525		40.3	55.3	3.3	67	7	12		C
or													
EBW Case Vent System Serial #0313 and above	1	1	1	Steel Cntr		23.87	36	2.4	50	7	12		C
XM28E1, E2/ XM141E1, E2/XM142E1, E2 Nuclear or Practice Warhead Sections	1	1	1	XM483E2	C-16	2180	2877	266	168	52.5	53		SRD

XMGM-29A SERGEANT

Component	Qy/ Rd	Qy/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Overall Dimensions (inches) Width	Overall Dimensions (inches) Height	Diameter	Phy Sec Classification
XM100 Rocket Motor	1	1	1	XM419 (aluminum)		1240	8303	319	223	48	48.5		C
	1	1	1	XM486 (steel)		1790	8870	289	220.125	47.125	48.125		C
AN/DJW-8 Guidance	1	1	1	XM420 (aluminum)		877	2033	177	124	48	48.5		C
Section	1	1	1	XM487 (steel)		930	2101	138.6	107.25	47.125	47.375		C
XM94 Control Surface Assembly	4	1	4	XM123/XM123E1 (aluminum)		110	172	14.9	55.5	38.1	12.1		C
XM62/XM63 Nuclear Warhead Section	1	1	1	M481/M481E1/ M481E2 (aluminum)		1650	3261	181.5	146.5	41.5	51.5		SRD
M212 Chemical Warhead Section	1	1	1	M943 (E-9)		1456	3067	176.7	146	41	52		C
XM65 Practice Warhead Section	1	1	1	M481/M481E2		1650	3261	181.5	146.5	41.5	51.5		U

8-INCH HOWITZER NUCLEAR ARTILLERY PROJECTILE

Component	Qy/ Rd	Qy/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Overall Dimensions (inches) Width	Overall Dimensions (inches) Height	Diameter	Phy Sec Classification
M422/M422C Projectile Case	1	1	1	M500 (Steel (Cylinder)	C-17	60	160	3.8			49.5	11.5	SRD
Accessory Parts Case	1	1	1	(Metal Can)	C-17	13	28	1.3			15	12	U
992 T-Z Nuc Pkg	1	1	1	M102 (birdcage)	C-18		230	3.7	25	16	16		SRD

8-INCH HOWITZER NUCLEAR ARTILLERY PROJECTILE—Continued

Component	Qy/ Rd	Qy/ Pkg	Pkg/ Rd	Container Designation	Figure No	Weight (lbs) Empty	Weight (lbs) Loaded	Cube (ft)	Overall Dimensions (inches) Length	Overall Dimensions (inches) Width	Overall Dimensions (inches) Height	Diameter	Phy Sec Classification
992 P-Z Nuc Pkg	1	1	1	M102 (birdcage)	C-18		135	3.7	25	16	16		SRD
or													
994 P-W Nuc Pkg	1	1	1	M102 (birdcage)	C-18		135	3.7	25	16	16		SRD
M80 Prop Chg w/MK2A4 Primer (for M115 Howitzer)	1	1	1	(Metal can)		22	53	1.6			29.3	9.8	U
M82 Primer (for M55, M110 Howitzer)	1	500	1/500	Wdn Box			62	1.95	24.375	12.125	11.375		U
MK 15 Mod ½	1	576	1/576	Wooden Box			69.0	1.52	25.5	16.5	6.25		U
Primer	1	912	1/912	Wooden Box			84.0	1.51	25.25	16.5	6.25		U
(for M55, M110	1	1008	1/1008	Wooden Box			126	2.00	24	12	12		U
Howitzer)	1	1008	1/1008	MK 2 Mod 0 Mtl Box			122	2.18	29	11.25	11.5		U
M3 Flash Reducer	1	40	1/40	Wooden Box									U
	1	50	1/50	Wooden Box			66.0	1.50	13.875	13.625	13.625		U
	1	100	1/100	Wooden Box			130	3.63	16.875	16.375	23.325		U
M424/M424E1	1	1	1	Wooden Box	C-19		356	7.1	42	15	19.5		U
Spotting Round							356	7.2	43	15	19.5		U
							356	8.6	51	15	19.5		U

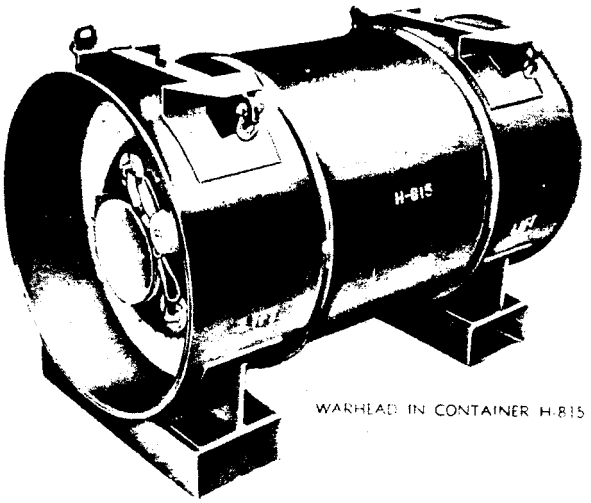


Figure C-1. H-815 container.

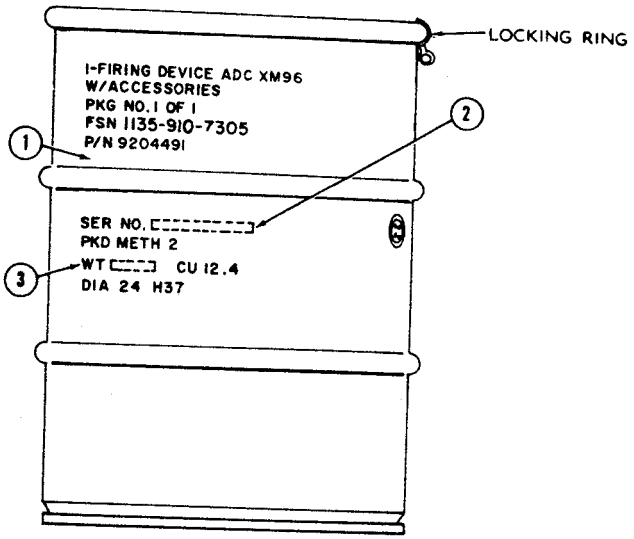


Figure C-2. Metal container.

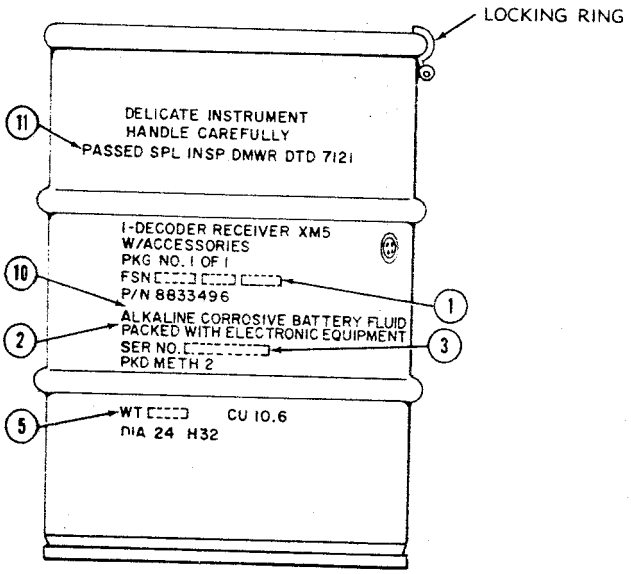


Figure C-3. Metal container.

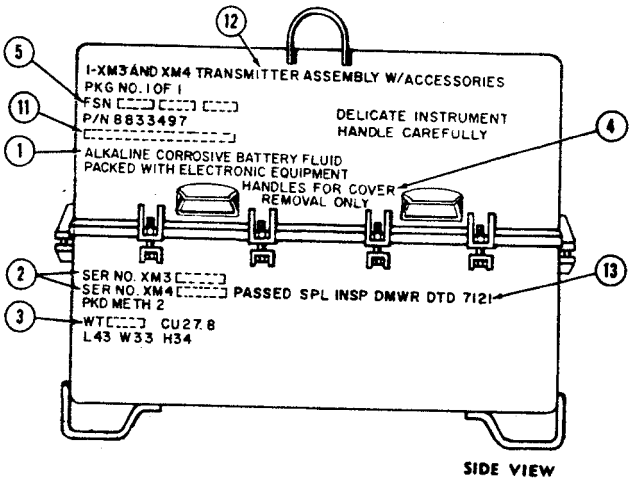


Figure C-4. Metal box.

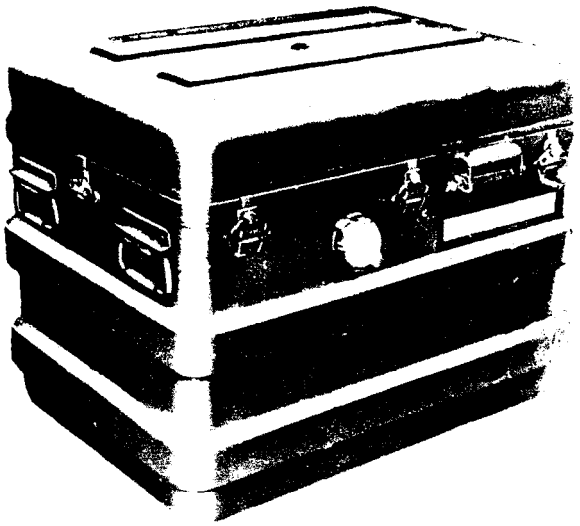


Figure C–5. H–913 container.

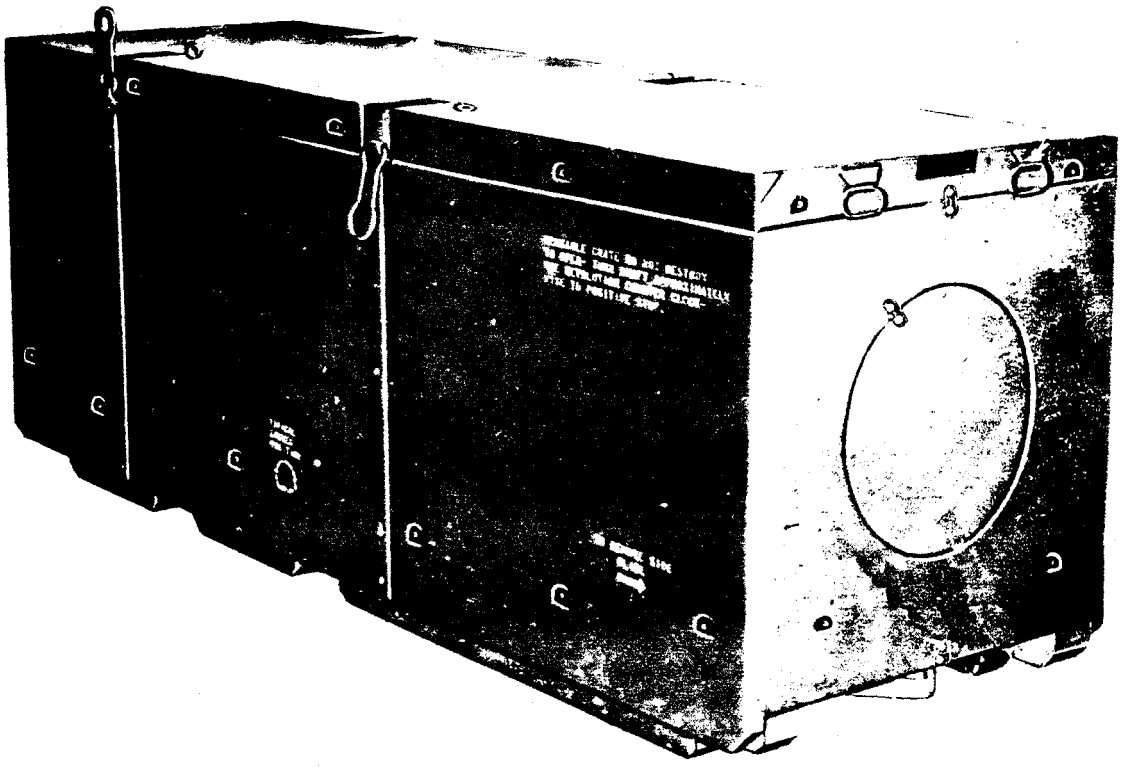


Figure C–6. M–473 container.

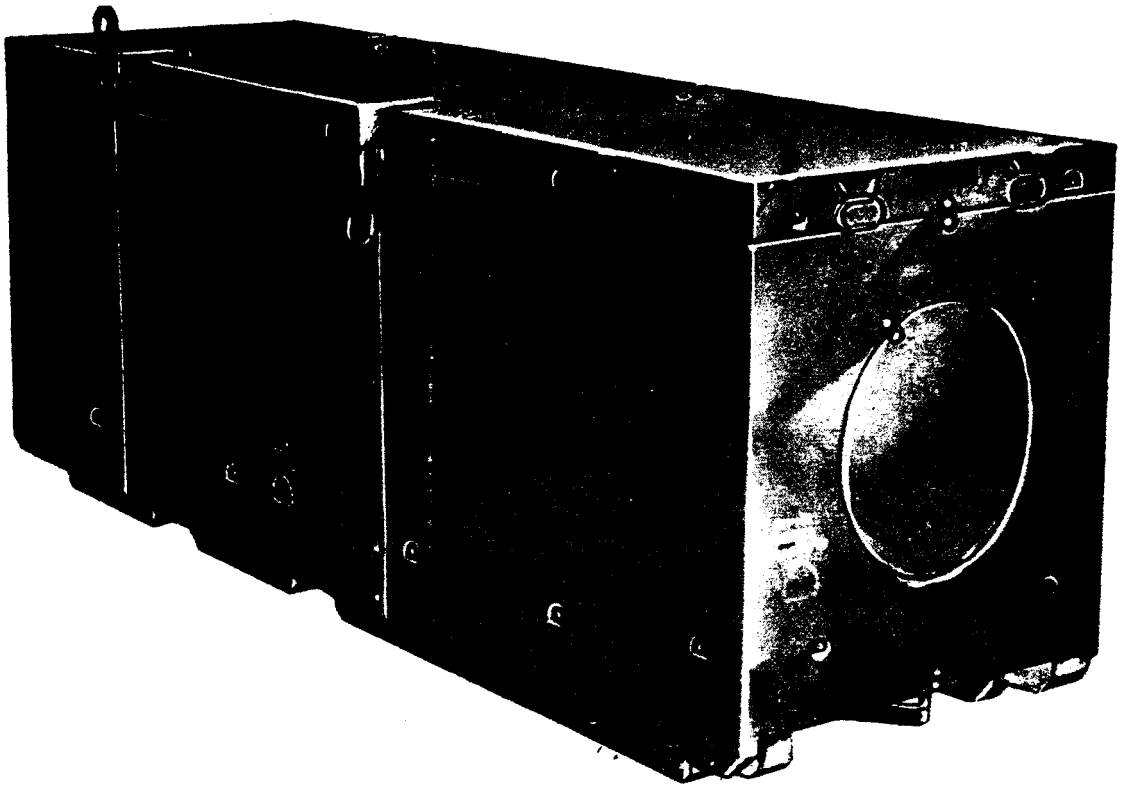


Figure C–7. M–473A1 container.

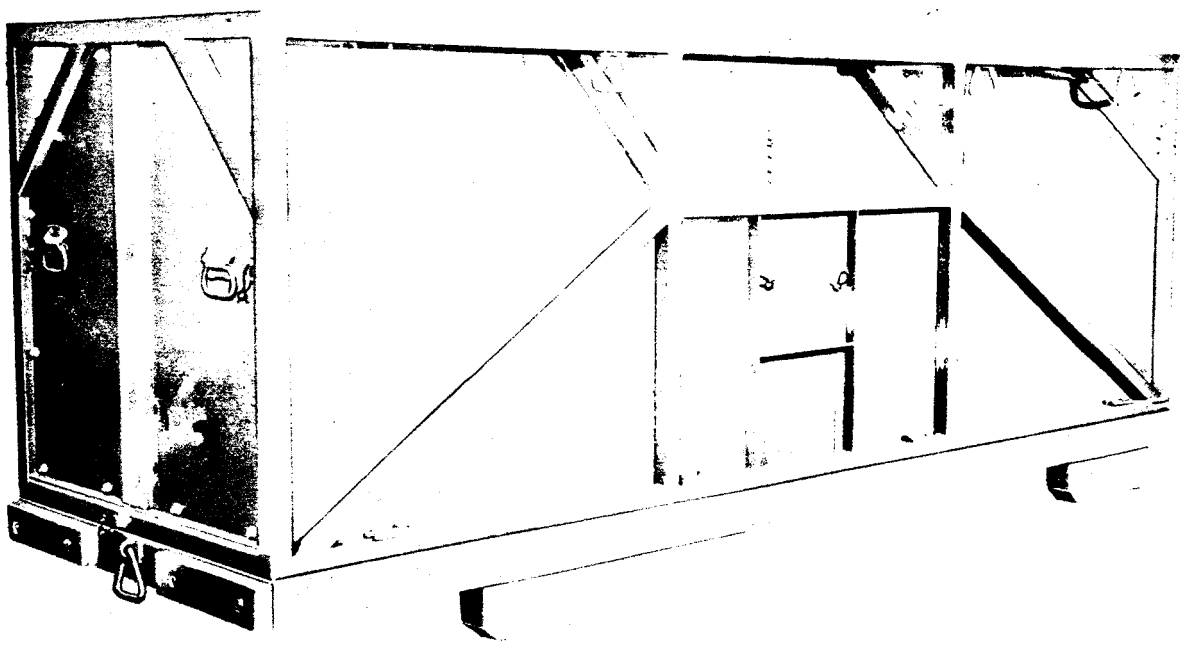


Figure C–8. M–480 steel container.

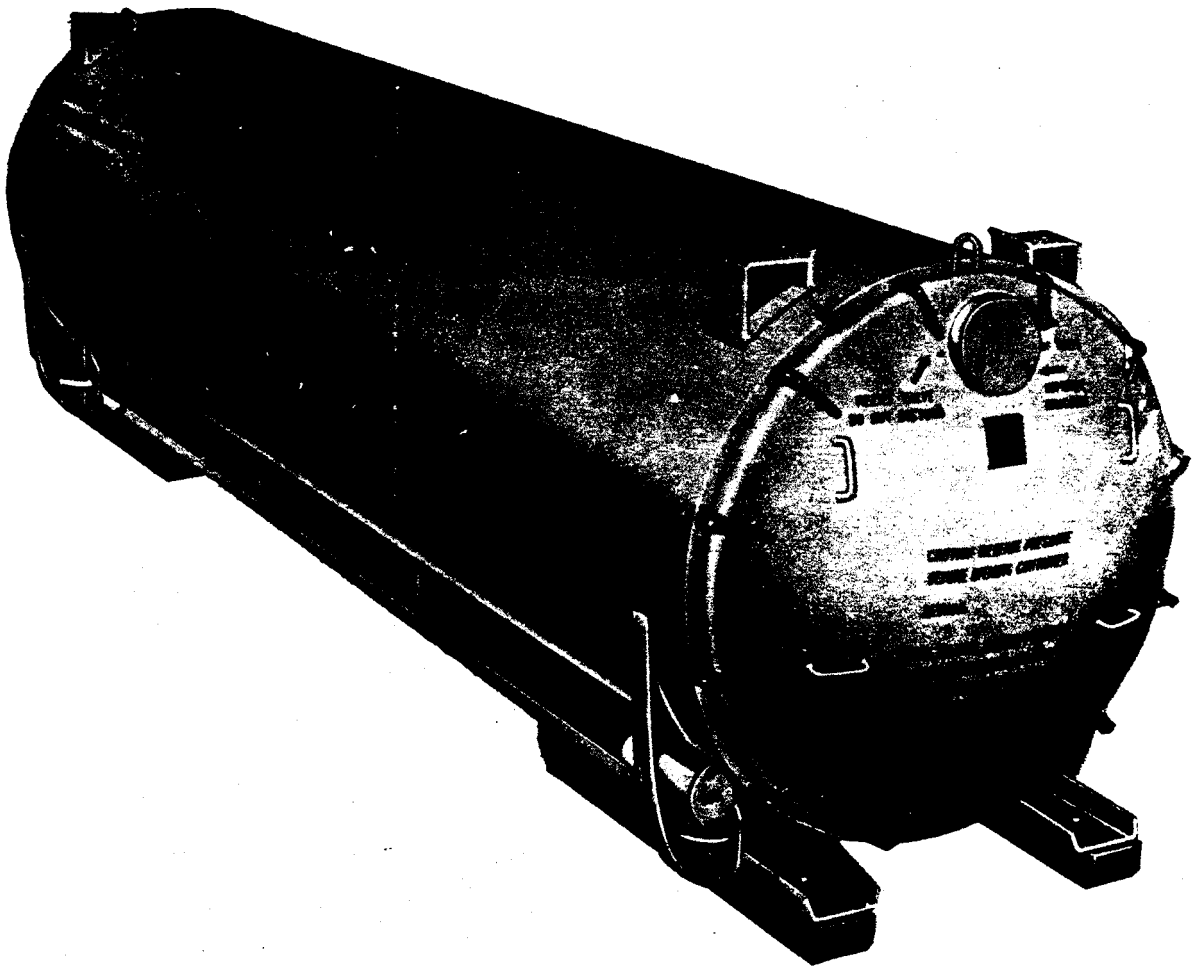


Figure C–9. M–410 Steel container.

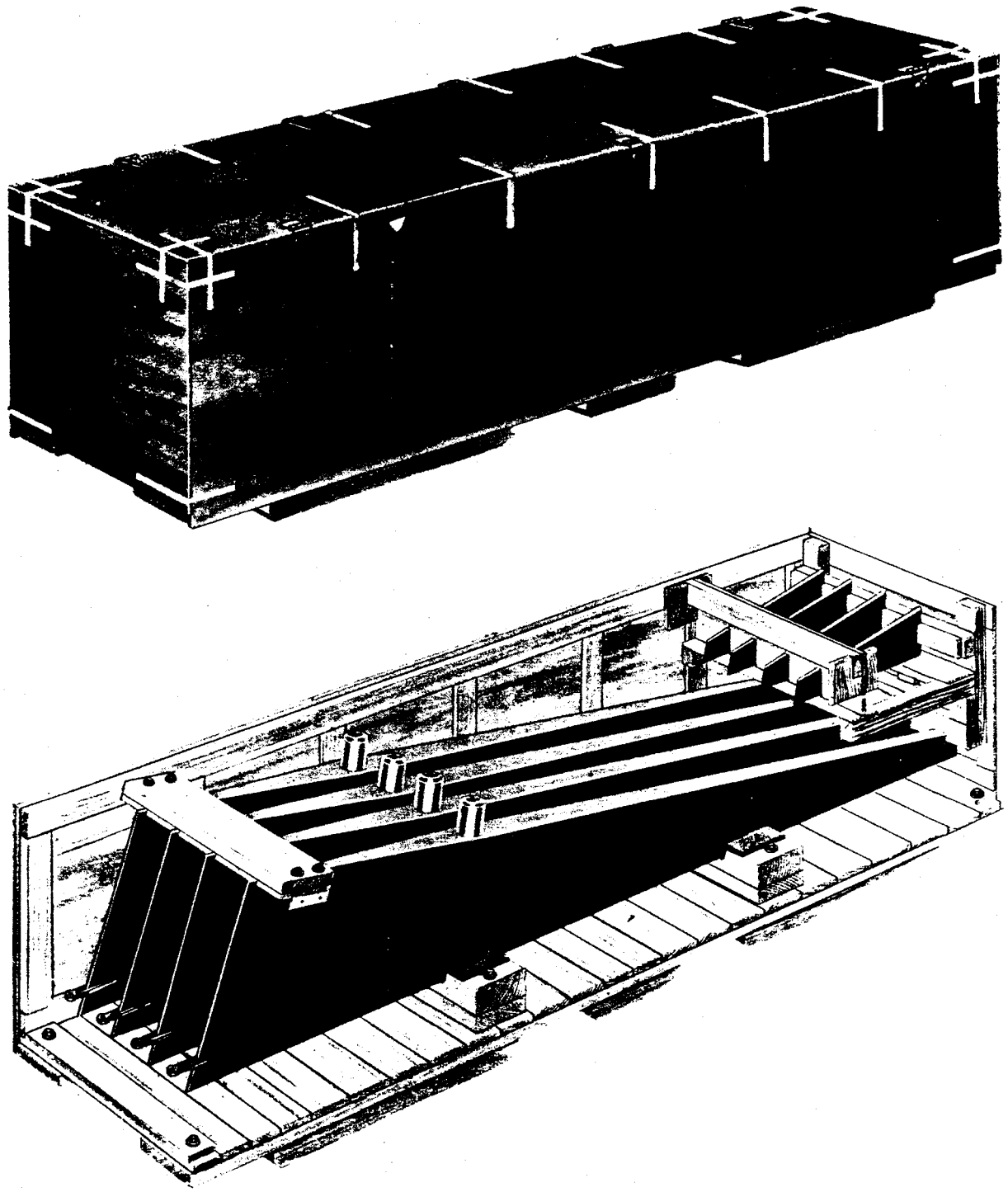
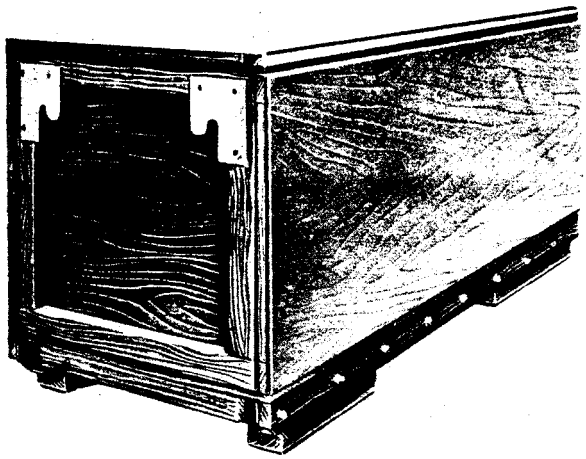


Figure C–10. M–31 plywood container.



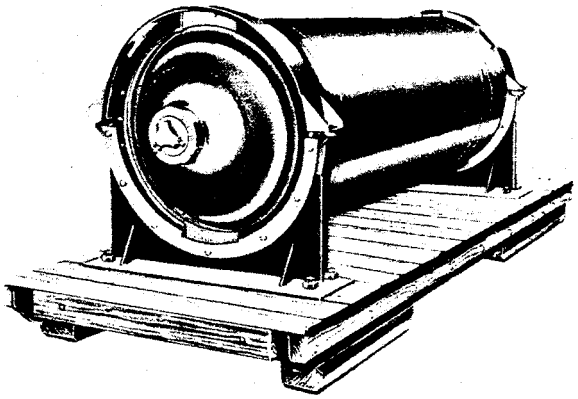


Figure C–11. Rocket motor container.

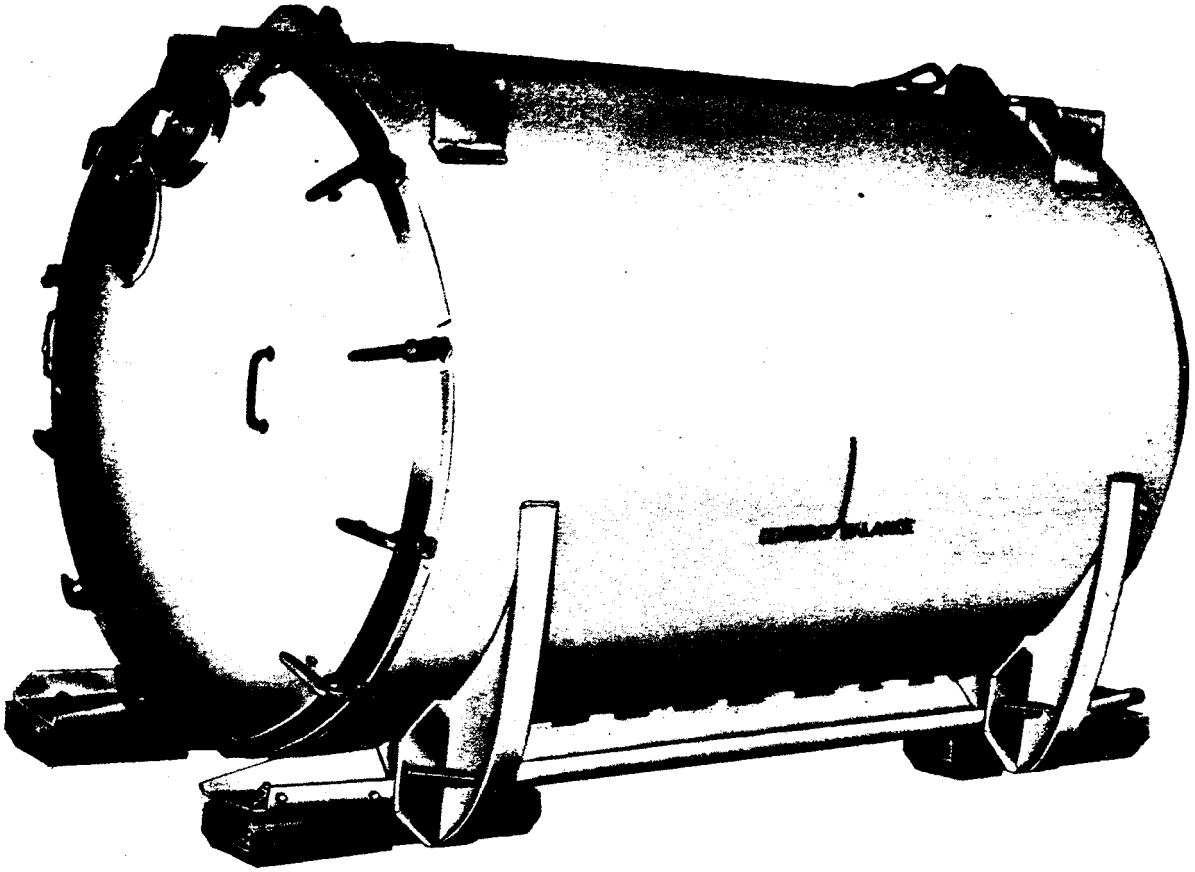


Figure C–12. M–409 steel container.

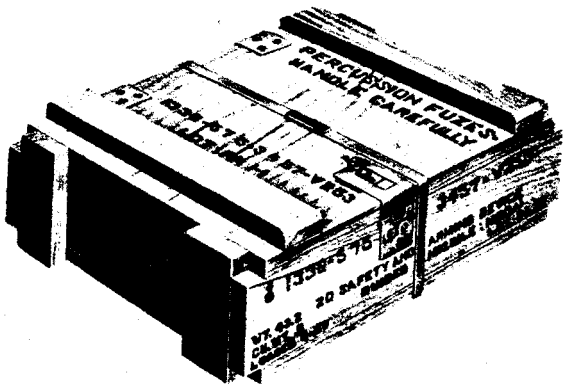


Figure C–13. Wooden crate.

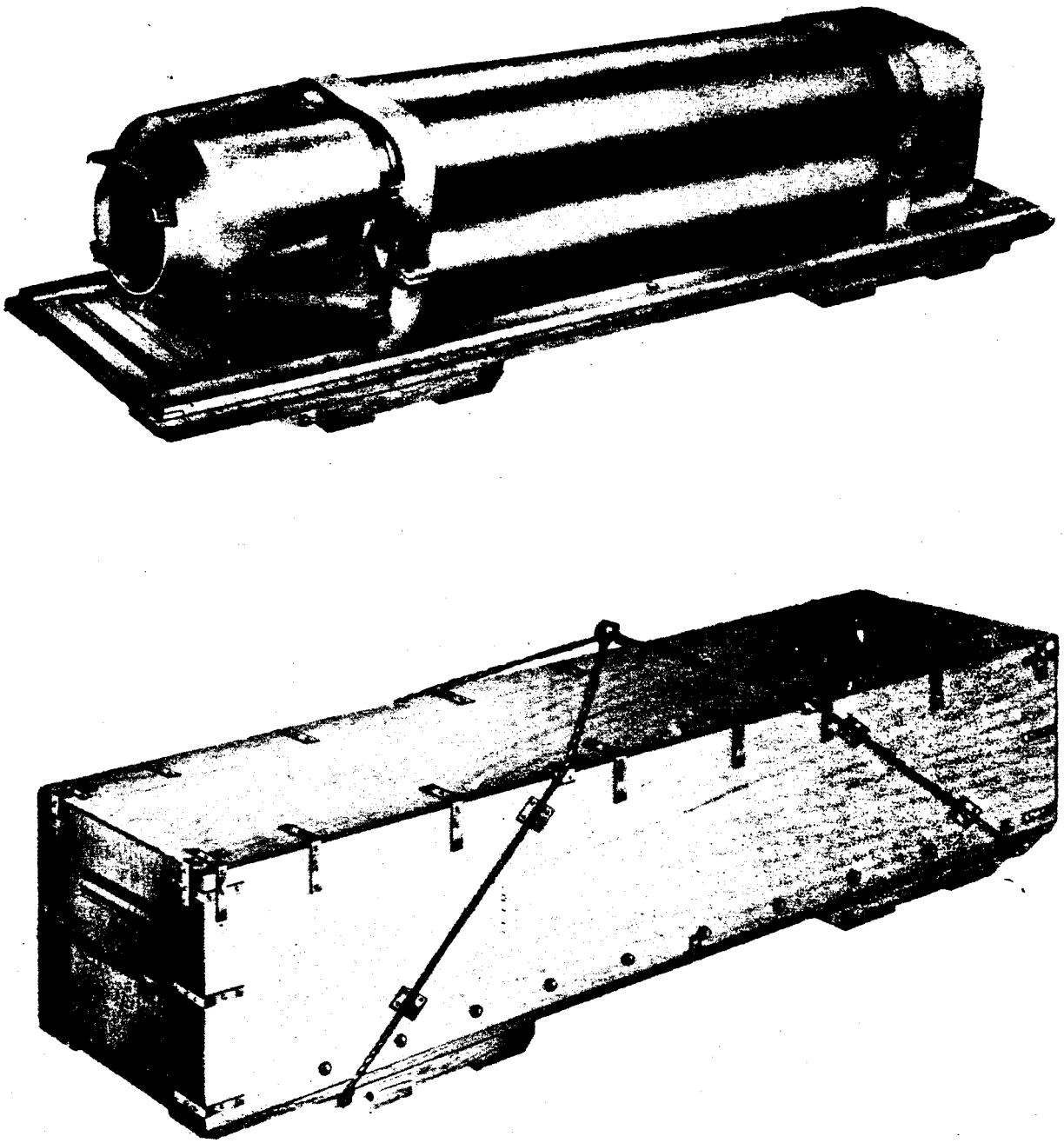


Figure C–14. Wooden crate.

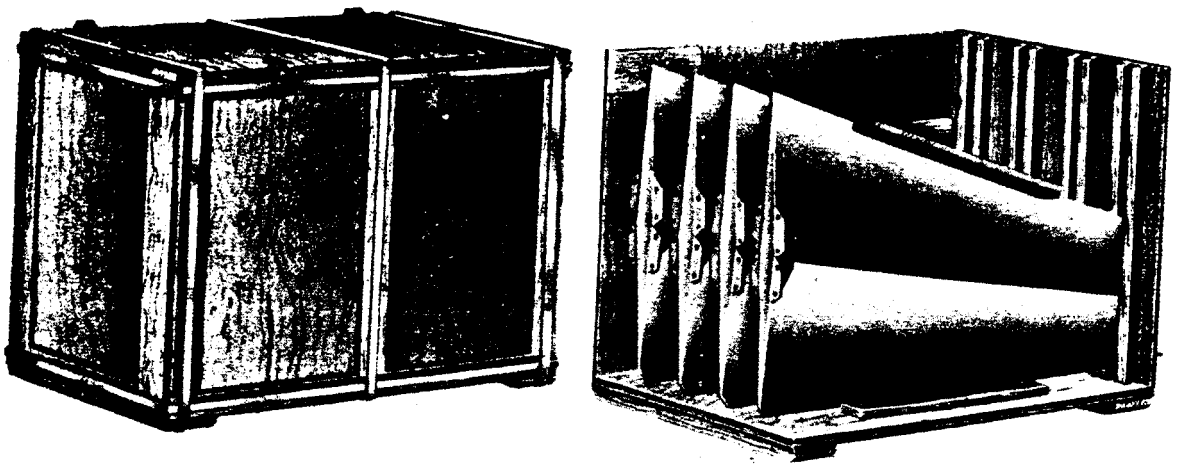


Figure C–15. M–82 crate.

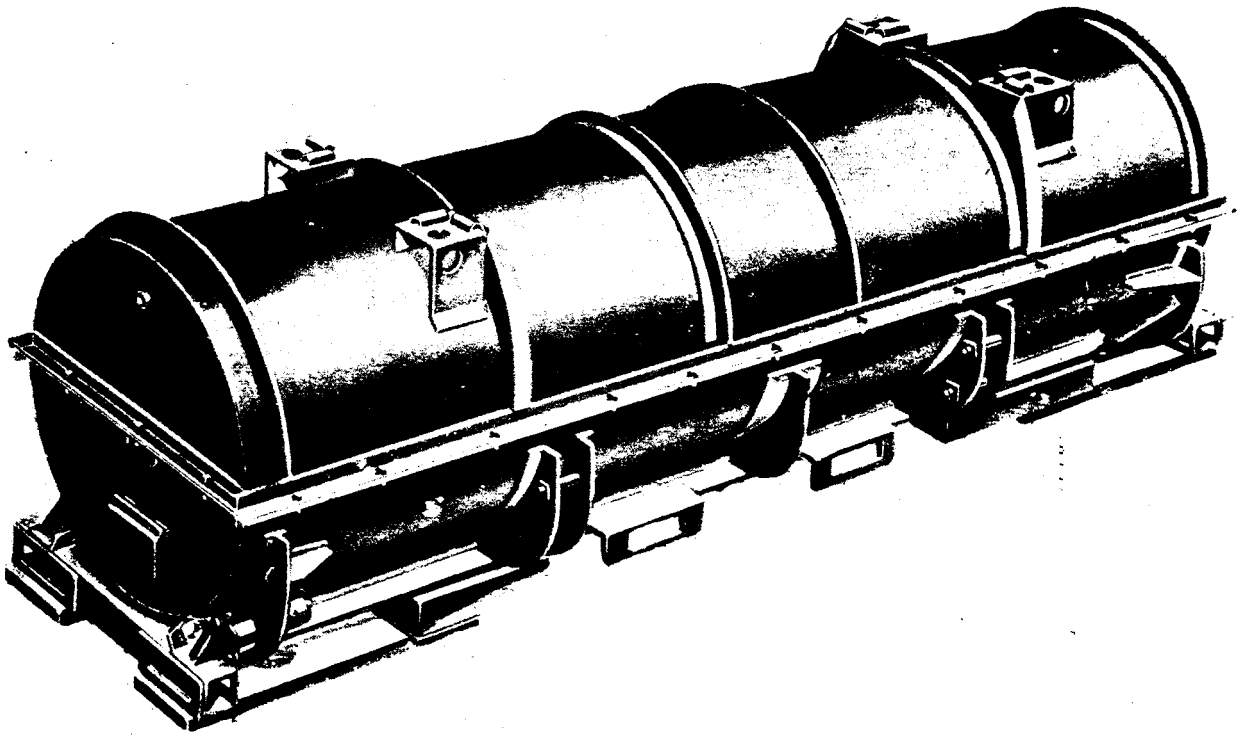


Figure C–16. XM–483E2 container.

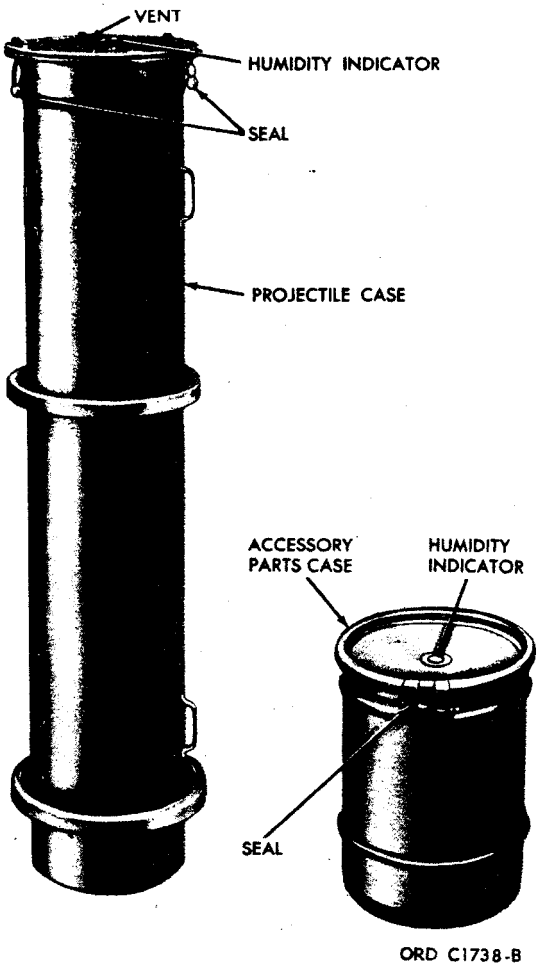


Figure C–17. M–500 cylinder.

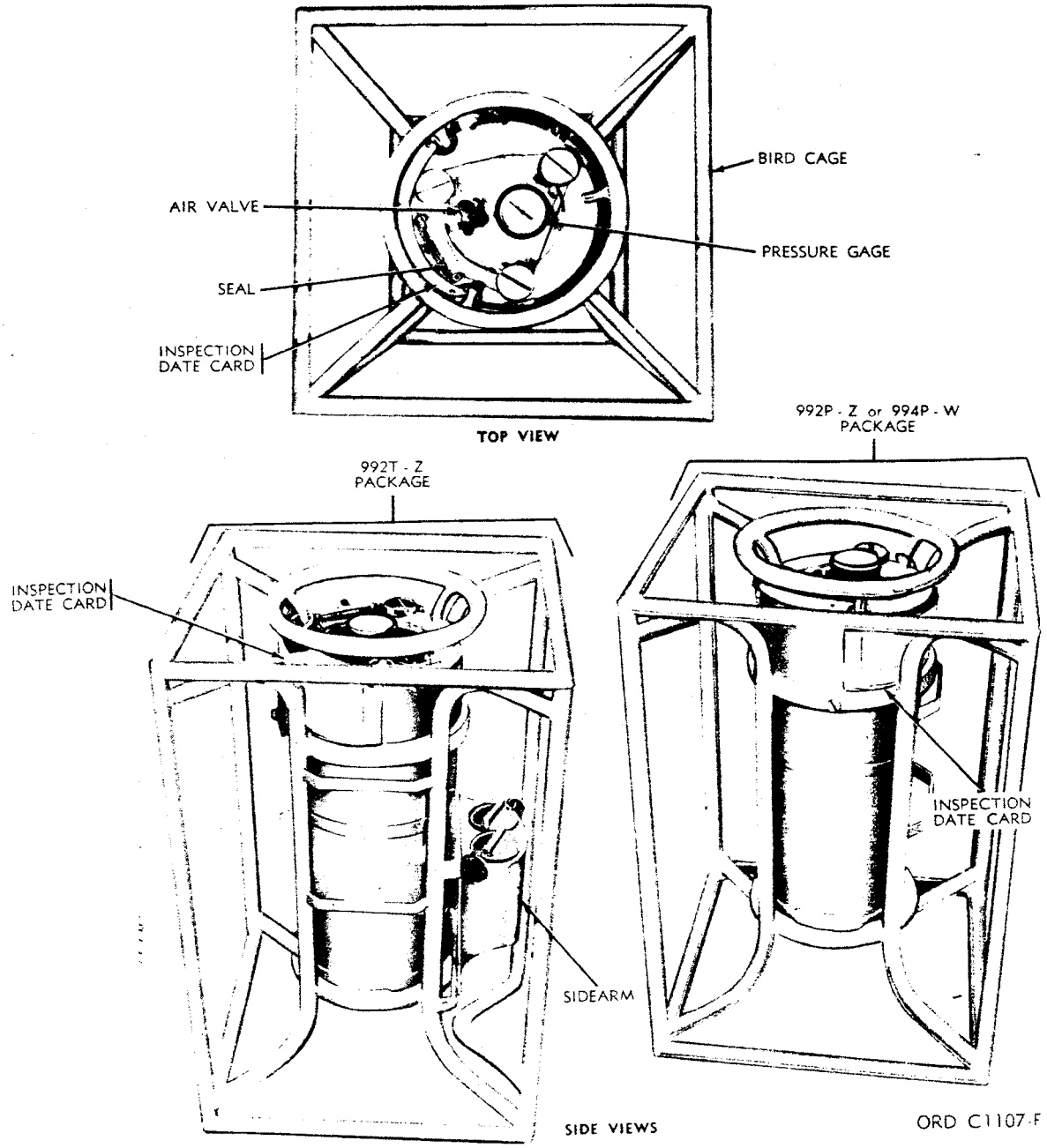


Figure C–18. M–102 bird cage.

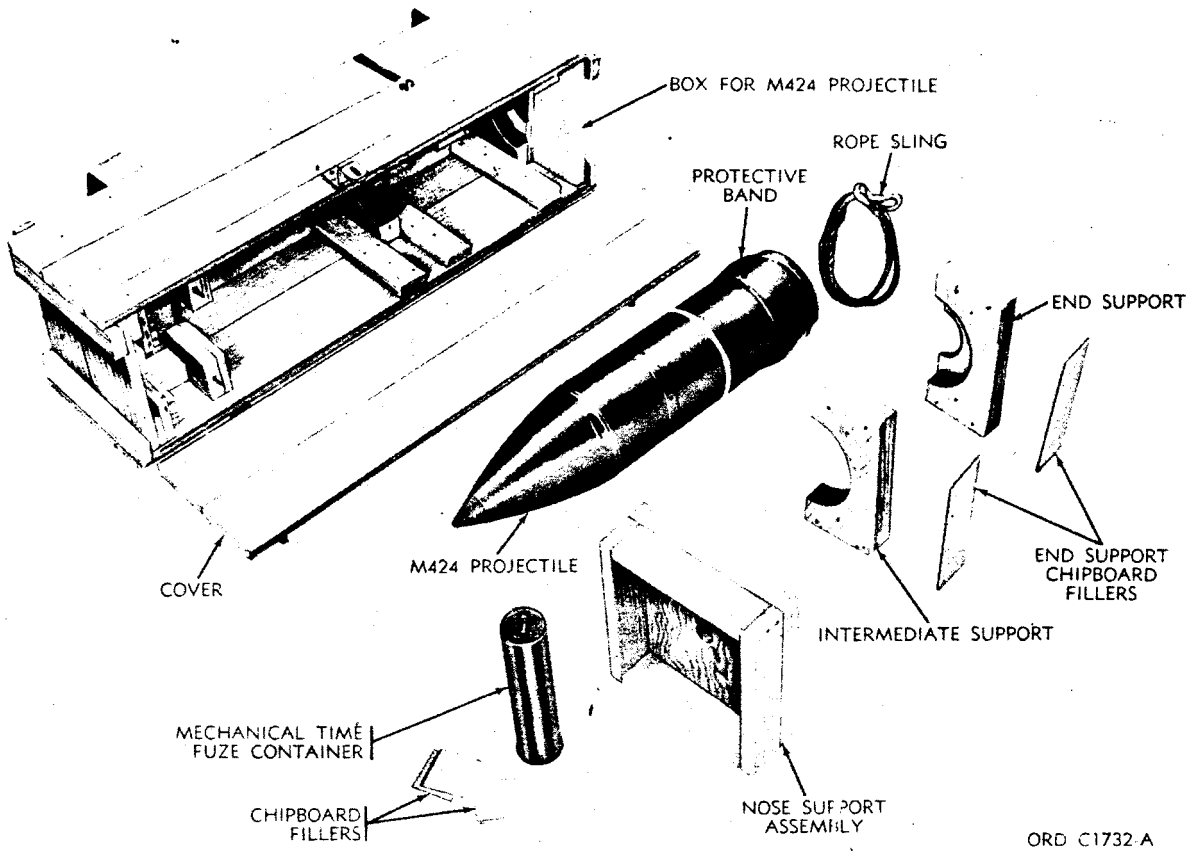


Figure C–19. Spotting round.

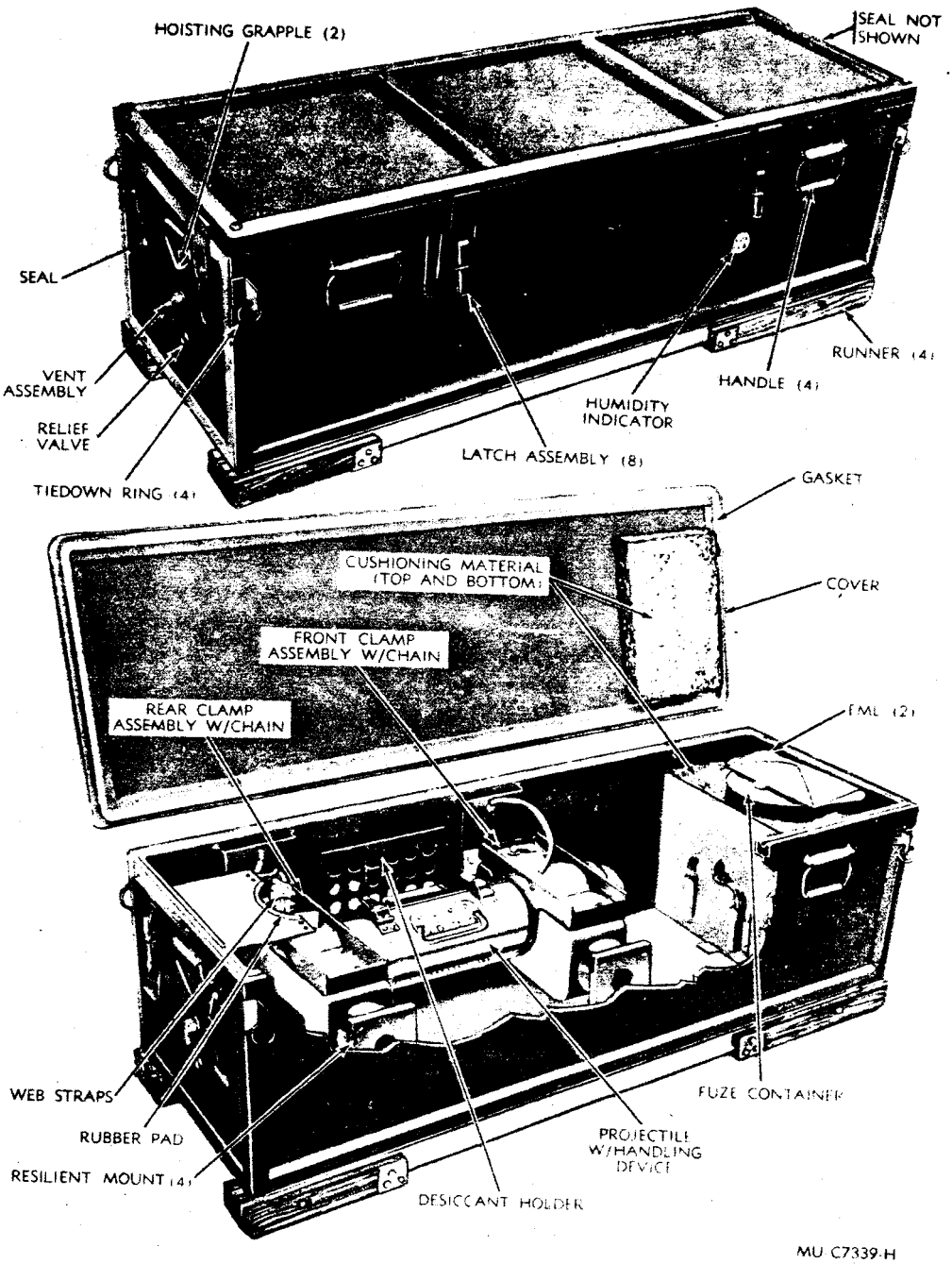


Figure C–20. XM–467 metal container.

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