

TECHNICAL MANUAL

PROCEDURES FOR DESTRUCTION

OF TANK-AUTOMOTIVE EQUIPMENT

TO PREVENT ENEMY USE

(US ARMY TANK-AUTOMOTIVE COMMAND)

HEADQUARTERS, DEPARTMENT OF THE ARMY

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

a. This manual is for the guidance of those whose duty it is to render inoperable or destroy equipment which is in imminent danger of capture by an enemy. The instructions contained herein are in accordance with the requirements of all international agreements concerning destruction of equipment to prevent enemy use which were in effect on the effective date of this manual or any changes thereto.

b. It provides army personnel with priorities and procedures for destruction to prevent enemy use of both combat and tactical vehicles. This includes the vital materiel carried by these equipments in the performance of their assigned missions.

c. Destruction of vehicle, armament and equipment when subject to capture or abandonment in a combat zone, will be implemented at the discretion of the unit commander in compliance with established policy or orders of the army commander. Ordinarily the armament should be destroyed in conjunction with the destruction of the

vehicle. However, if limitations of time, personnel, and materials prevent simultaneous destruction of the vehicle and armament, first priority will be given to destruction of the armament.

1-2. Purpose

The purpose of this manual is to coordinate destruction information from several existing manuals and to present it in one complete volume.

This is not a totally self-contained destruction document. It is a guide to aid in the destruction process when such action is required.

1-3. Reporting of Equipment Publication Improvements

The reporting of errors, omissions and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded directly to the Commanding General, US Army Tank Automotive Command, ATTN: AMSTA-MAP, Warren, MI 48090.

Section II. PRELIMINARY CONSIDERATIONS

1-4. Authorization

a. Only divisional or higher commanders have the authority to order destruction of equipment.

They may, however, delegate this authority to subordinate commanders when the situation demands it.

b. Conditions under which destruction will be effected are also command decisions. These decisions may vary with the tactical situation, quantity and location of the equipment, facilities for accomplishing destruction, and time, which is usually critical.

1-5. Policy

a. If destruction to prevent enemy use is necessary, equipment must be damaged to the point that it can no longer function properly or be restored to its original condition in the combat zone.

b. Destruction should also be designed to slow or impede enemy troop movements without creating hazards to friendly troops.

c. The actual use of this policy in the field will require imagination and flexibility in adapting available resources to the immediate situation.

d. Destruction of similar items of equipment and components must be to the same degree and in the same manner to prevent fabrication of a complete item through cannibalization.

1-6. Standard Operating Procedures

a. Because destruction of equipment in the combat zone is geared to the immediate tactical situation, it is difficult to establish Standard Operating Procedures (SOP). However, the methods of destruction contained in this manual are basic and flexible enough to serve as SOP's in combat emergency.

b. Command decisions are required to effect destruction when the using organization is not authorized the necessary demolition materials.

These decisions will take into account all related materials needed and the tactical situation under which destruction will take place.

1-7. Training

a. Rehearsal of concerned personnel in all phases of destruction is mandatory. Training, particularly in demolition techniques, should be accomplished with live ammunition and demolition charges if possible. Instructions in selecting sites, blocking communication routes, and in various other methods to retard enemy movement should also be included in the training program.

b. Personnel should be thoroughly familiar with the provisions of TM 9-1375-200, and FM 5-25 pertaining to safety precautions and destruction techniques.

c. Training should integrate counterintelligence aspects with emphasis on insuring that items of intelligence value to the enemy are removed from the equipment being destroyed and evacuated or completely destroyed themselves.

Section III. PRIORITIES FOR DESTRUCTION AND DEGREE OF DAMAGE

1-8. General

First priority. must always be given to the destruction of classified material and associated documents.

1-9. Guide to Priorities

a. Governed by combat conditions and the type of materiel involved, each local Commander will determine priorities for destroying the equipment under his Command.

b. High priority must be given to the destruction of ammunition and/or weapons which could be used in immediate retaliation. Grenades, land mines, rockets, etc., which can be deployed without weapons; and ammunition for which the enemy has weapon capability come under this category.

c. Destruction of casualty-producing ammunition before less hazardous munitions (riot-control agents, flares, illuminating projectiles, etc.) will be affected.

d. Salvage of items in short supply must be accomplished where such items are vital to the continued defense of the Unit.

e. When the vehicle must be destroyed, it must be so badly damaged that it cannot be restored to a usable condition in a combat zone, either by repair or cannibalization. Adequate destruction requires destroying all parts essential to the operation of the vehicle. This includes essential spare parts being carried with the vehicle or as a part of the units Prescribed Load List (PLL). They too, must be destroyed or damaged beyond repair in the same priority as the installed parts. For components with security classification, complete destruction beyond identification is required. When either lack of time or personnel prevents destruction of all parts, the priority listings must be strictly adhered to. The order of priority is shown in the table that follows.

By following this priority item table, the same essential parts are destroyed on all vehicles, and the enemy cannot construct one complete unit from a several damaged ones. This priority is in accordance with NATO Standardization Agreement (STANAG 2113) and Department of the Army policy.

| <i>Equipment</i> | <i>Priority</i> | <i>Parts</i> |
|---|-----------------|--|
| VEHICLES (INCLUDING TANKS AND ENGINEER EQUIPMENT) | 1 | Carburetor/fuel Pump/injector/distributor/fuel tanks/fuel lines |
| | 2 | Engine block and cooling system |
| | 3 | Tires/ tracks and suspensions |
| | 4 | Mechanical or hydraulic systems (where applicable) |
| | 5 | Differentials / transmissions / transfer cases |
| | 6 | Frame/ hull |
| GUNS | 1 | Breech. breech mechanism. and spares |
| | 2 | Recoil mechanism |
| | 3 | Tube |
| | 4 | Sighting and fire control equipment (priority 1 for antiaircraft guns) |
| | 5 | Carriage and tires |
| SMALL ARMS | 1 | Breech mechanism |
| | 2 | Barrel |
| | 3 | Sighting equipment (including infrared) |
| | 4 | Mounts |
| OPTICAL EQUIPMENT | 1 | Optical parts |
| | 2 | Mechanical components |
| RADIO | 1 | Transmitter (oscillators and frequency generators, and IFF equipment) |
| | 1 | IFF equipment |
| | 2 | Receiver. including IFF equipment |
| | 3 | Remote control units of switchboards (exchanges) and operating terminals |

| <i>Equipment</i> | <i>Priority</i> | <i>Parts</i> |
|---|------------------------------|--|
| RADAR AND OTHER ELECTRONIC EQUIPMENT | 4 | Power supply and / or generator set |
| | 5 | Antennae |
| | 6 | Tuning heads |
| | 1 | Frequency determining components records, operating instructions which are subject to security regulations, and identification material (Identification Friend or Foe (IFF)) |
| | 2 | Antennae and associated components such as radiators, reflectors, and optics |
| | 3 | Transmission lines and waveguides |
| | 4 | Transmitter high voltage components |
| | 5 | Control consoles, displays, plotting boards |
| | 6 | Cable system |
| | 7 | Automatic devices |
| GUIDED MISSILE SYSTEM | 8 | Other control panels and generators |
| | 9 | Carriage and tires |
| | 1 | Warheads, war reserve items, and missiles |
| | 2 | Radars and IFF equipment, including records, operating instructions, and IFF materials subject to security regulations |
| | 3 | Battery control centrals and control vans |
| | 4 | Launchers, including control circuits |
| | 5 | Measuring and test equipment |
| 6 | Generators and cable systems | |

f. Select a point of destruction that will cause greatest obstruction to enemy movement and also one which protects friendly troops from fragments or ricocheting projectiles which occur during the destruction.

1-10. Classified Equipment

Classified equipment must be destroyed to such a degree as to prevent duplication by, or revealing means of operation or function to enemy.

1-11. Associated Classified Documents

Any classified documents, notes, instructions, or other written material pertaining to function, operation, maintenance; or employment including drawings of Part Lists, must be destroyed in a manner to render them useless to the enemy.

CHAPTER 2

METHODS OF DESTRUCTIONS

Section I. GENERAL

2-1. Application

a. The methods for destruction outlined in this chapter are included for guidance only and may be modified, as required, by the tactical situation.

b. Experience gained from actual destruction activities is the best guide as to required quantities of explosives to be used in demolition procedures. The type and amount of demolition charge needed for a specific destruction job can be determined in this manner.

2-2. Precautions

a. Observance of safety precautions is mandatory

regardless of the method of destruction or the urgency of the situation.

b. Only trained, experienced personnel will accomplish these procedures. Personnel responsible for the destruction of vehicular materiel should have special training and be thoroughly familiar with the required procedures.

c. No fewer than two people, and no more than the minimum number required for safety and efficiency will be permitted to engage in a destruction procedure.

Section II. PROCEDURES

2-3. Methods

a. The following methods of destruction may be used either singly or in combination. The actual method or methods used in a given situation depends on time, personnel, combat situation, and the means of destruction available.

(1) *Burning*. Burning requires fuel, oil, incendiary grenades, or other inflammables. Proper placement of equipment is essential to effect the hottest, most destructive fire. Any mechanical destruction required will be accomplished prior to burning.

(2) *Demolition (explosives)*. Requires suitable explosives or ammunition (FM 5-25). The way in which a demolition charge is placed can make the difference between minor damage or complete

destruction. Demolition employs use of some of the following: TNT or equivalent, demolition blocks, electric or non-electric blasting caps, time blasting fuse, fuse lighters, hand grenades, etc.

(3) *Gunfire*. Requires artillery, rifles using rifle grenades, 40 MM grenades, or launchers using anti-tank rockets.

(4) *Mechanical*. Requires axe, mattock, sledge, crowbar, or similar implement.

b. In general, destruction of essential parts, followed by burning, will usually be sufficient to render the vehicle useless. However, selection of the particular method of destruction requires imagination and resourcefulness in the utilization of facilities, with due consideration for time, which is always important.

CHAPTER 3

**SPECIAL INSTRUCTIONS FOR DESTRUCTION OF COMBAT AND
TACTICAL VEHICLES AND EQUIPMENT**

Section I. COMBAT VEHICLES**NOTE**

Typical gun and heavy howitzer destruction procedures follow. This includes guidance for destroying fire control instruments, armament and communication equipment.

3-1. Location of Fire Control Instruments and Equipment

(fig. 3-1)

Sighting and fire control instruments and equipments are costly and difficult to replace. Yet, they are relatively light in weight; hence, they should be conserved whenever practicable. In the event these

equipments come under imminent threat of capture by the enemy, they will be completely destroyed. All optical elements and mountings will be smashed. These equipments include telescopes, gunner's quadrants and binoculars, among others (fig. 3-1).

3-2. Destruction of Communication Equipment
(fig. 3-2)

Radios and intercommunication equipment shall be damaged mechanically in conjunction with the destruction of the vehicle. Circuit and wiring diagrams, performance data, and technical publications shall be completely burned.

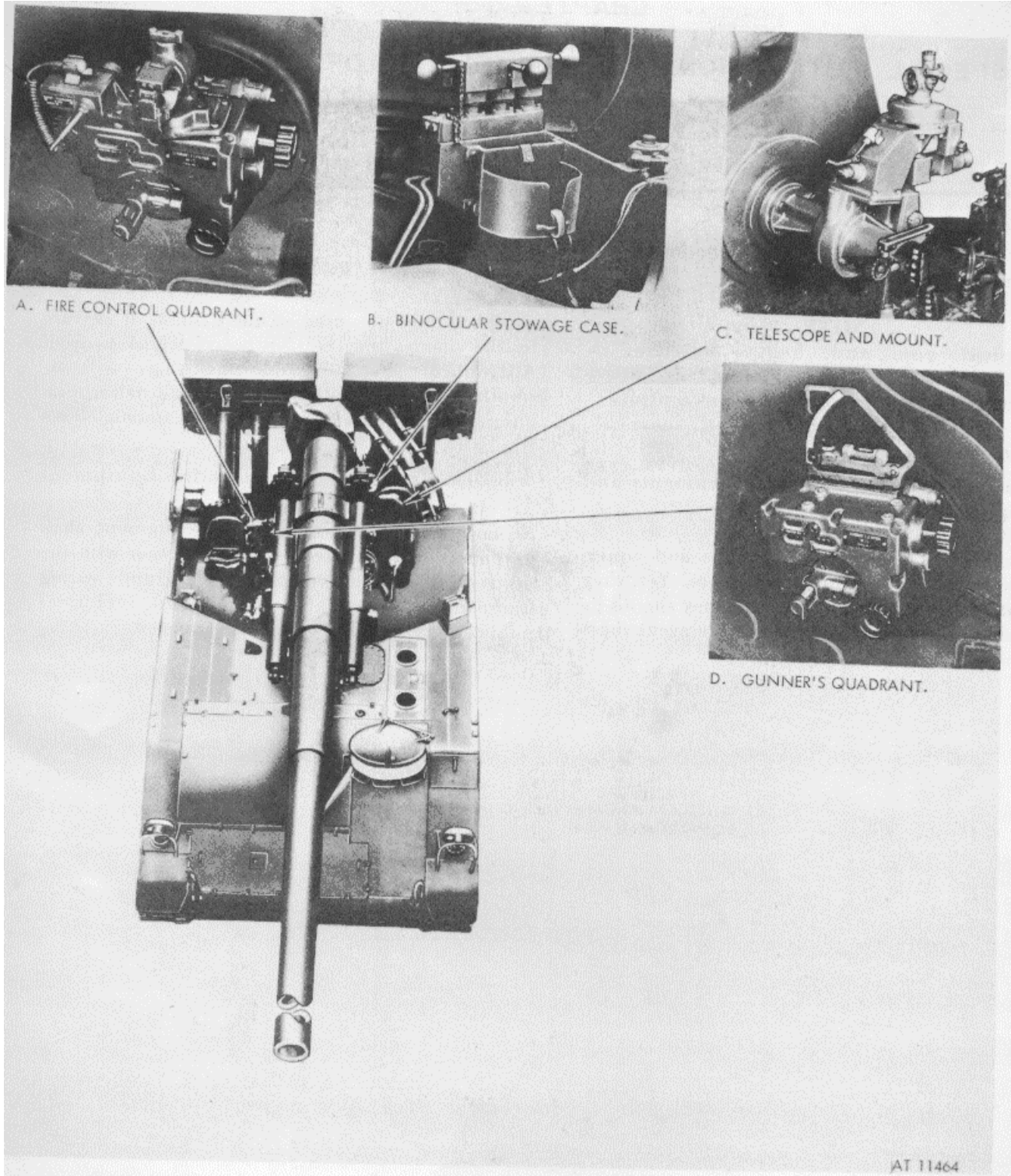


Figure 3-1. Destruction of fire control instruments and equipment.

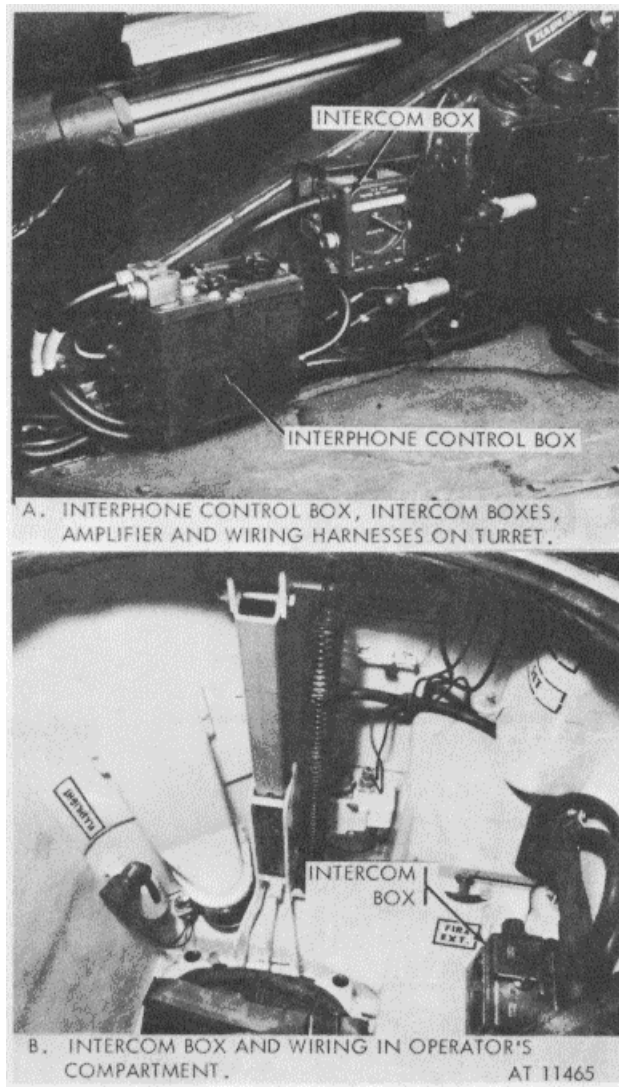


Figure 3-2. Destruction of communication equipment.

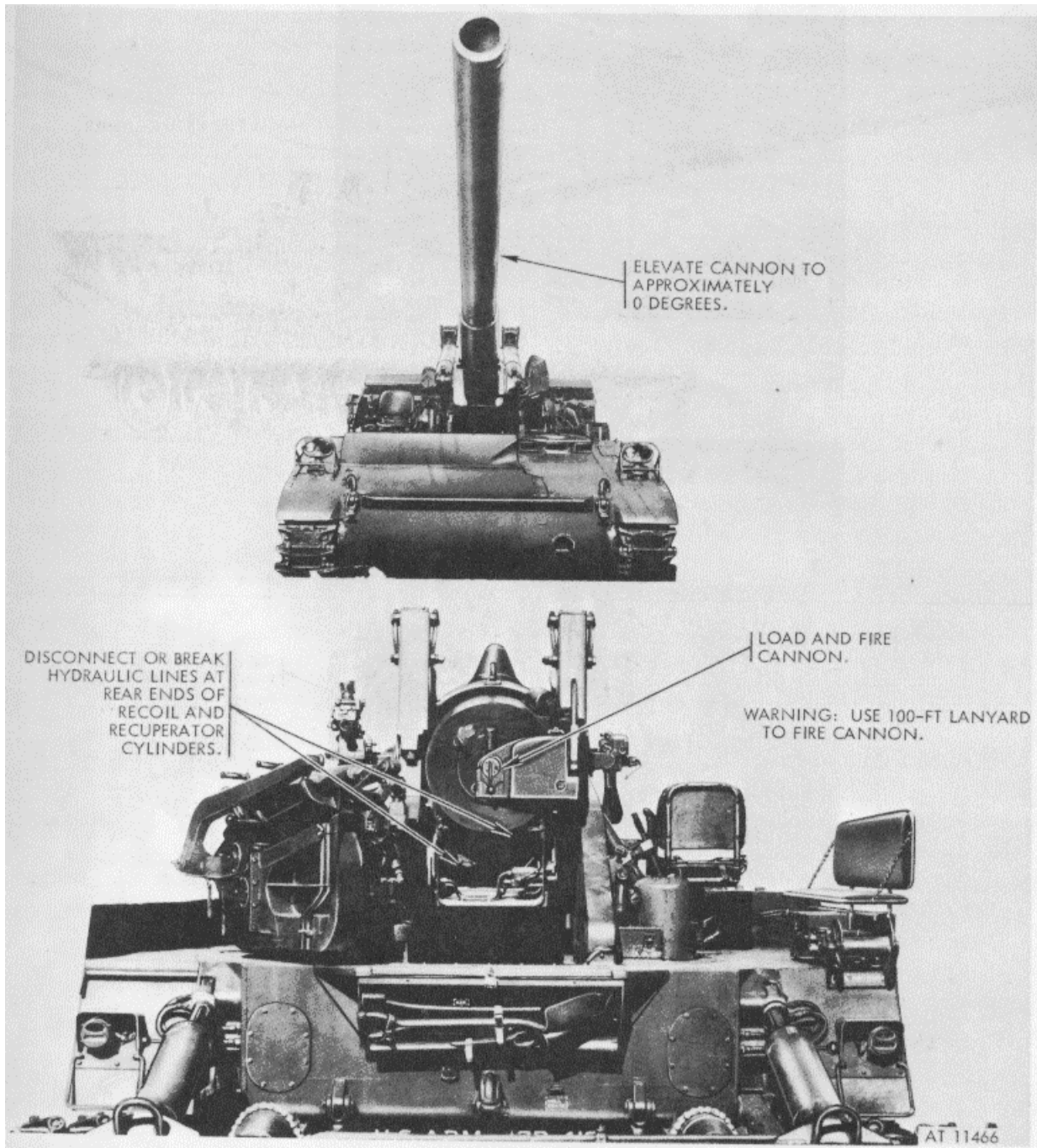


Figure 3-3. Destruction of armament.

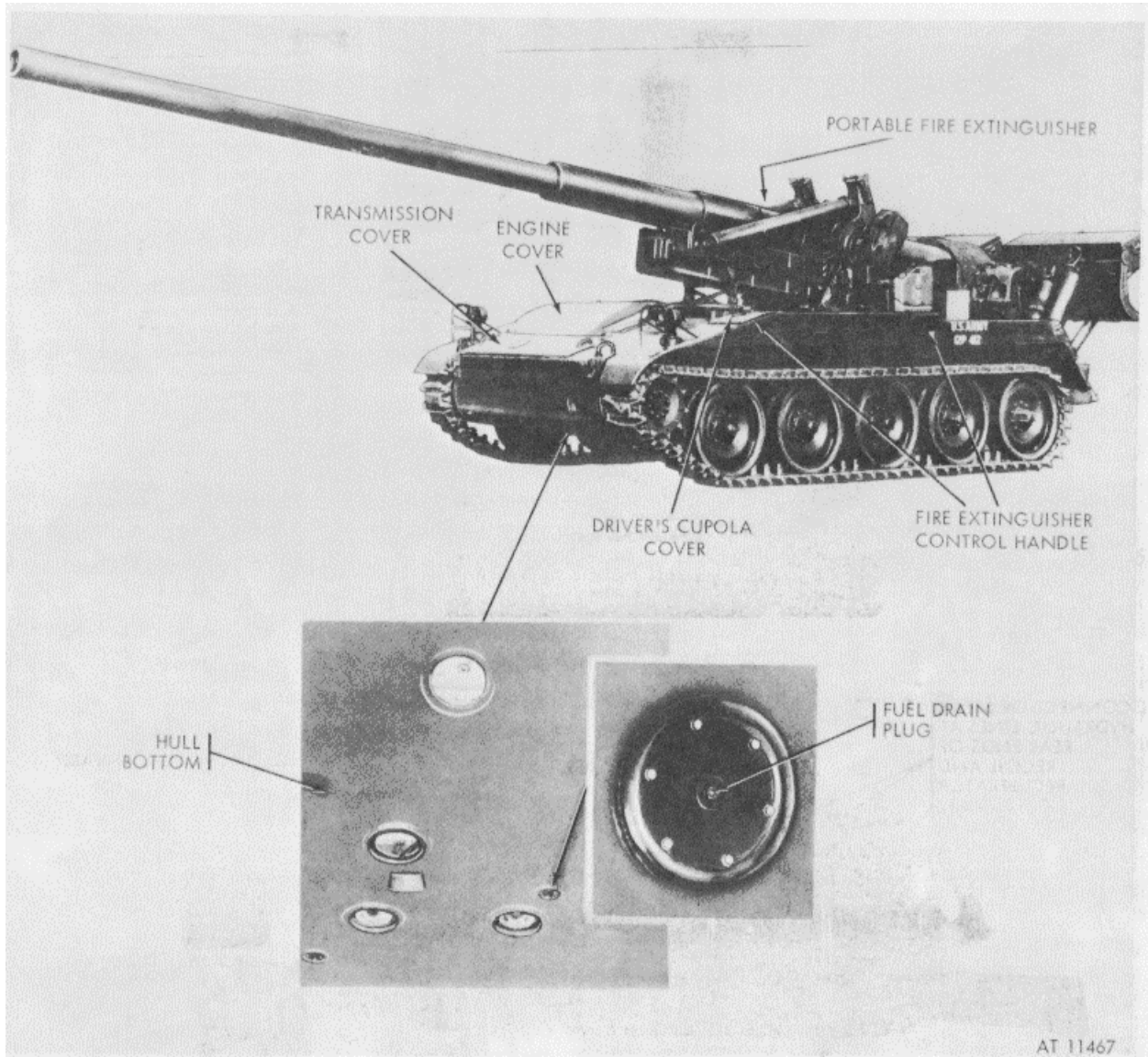
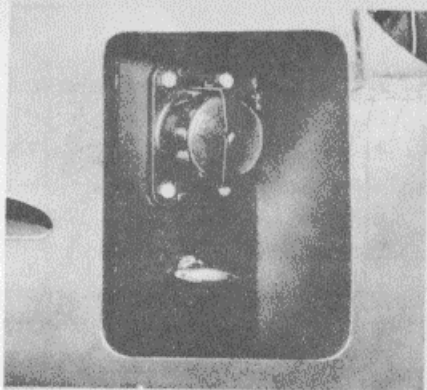
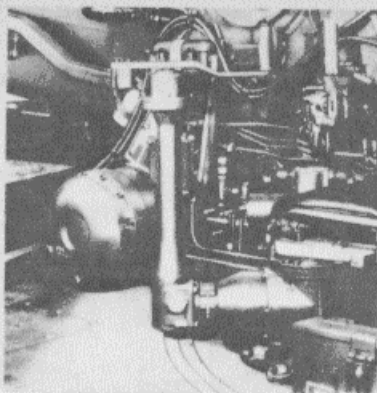


Figure 3-4. Destruction of vehicle-by burning.

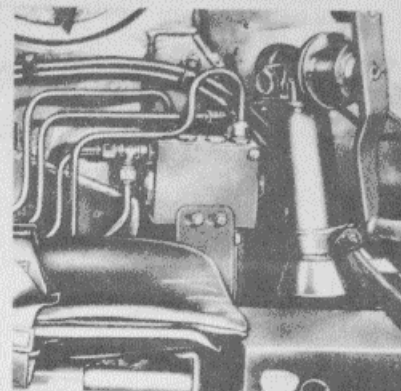
The items shown below must be smashed when destruction by burning, by gunfire, or by high-explosive ammunition would not result in their complete destruction.



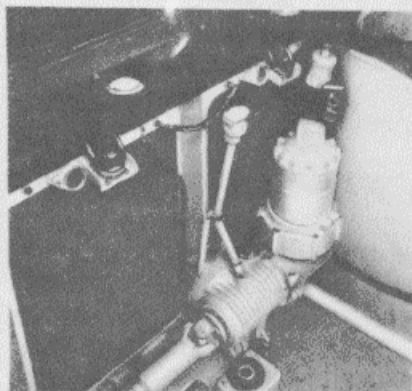
A. FIRE EXTINGUISHERS: REMOVE AND DISCHARGE PORTABLE UNITS. DISCHARGE FIXED SYSTEM (LEFT SIDE OF VEHICLE).



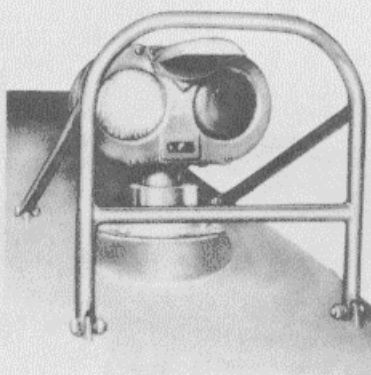
B. TRAVERSING GEAR BOX (LEFT SIDE OF VEHICLE).



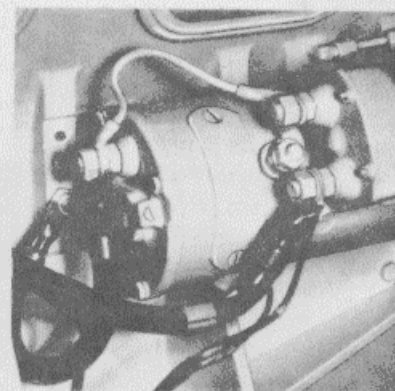
C. ELEVATING GEAR BOX (RIGHT SIDE OF VEHICLE).



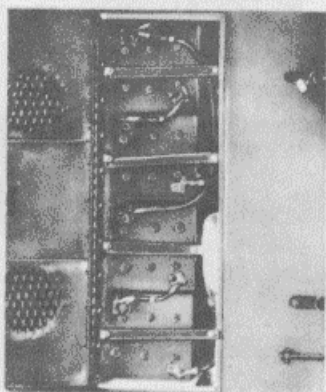
D. GENERATOR GEAR BOX AND RADIATOR (ENGINE COMPARTMENT).



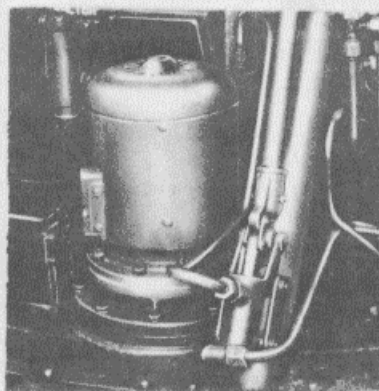
E. HEADLIGHTS: SMASH ALL LIGHTS.



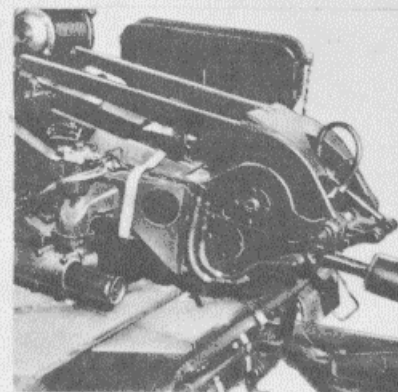
F. STARTER AND ENGINE BLOCK, TURBOCHARGER AND BLOWER (ENGINE COMPARTMENT).



G. BATTERIES AND FAN (LEFT SIDE AND TOP OF VEHICLE).



H. HYDRAULIC PUMP MOTOR (RIGHT SIDE OF VEHICLE).

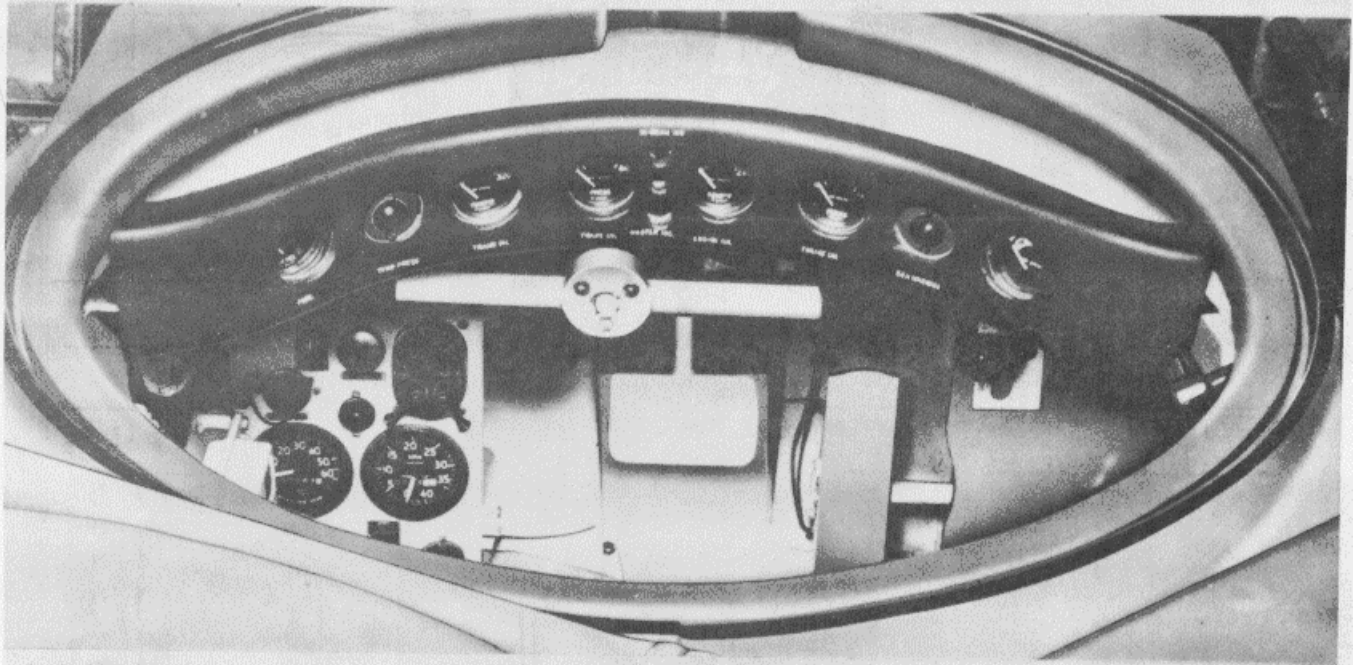


I. LOADER AND RAMMER AND SWING CYLINDER HOUSING (LEFT SIDE OF VEHICLE).

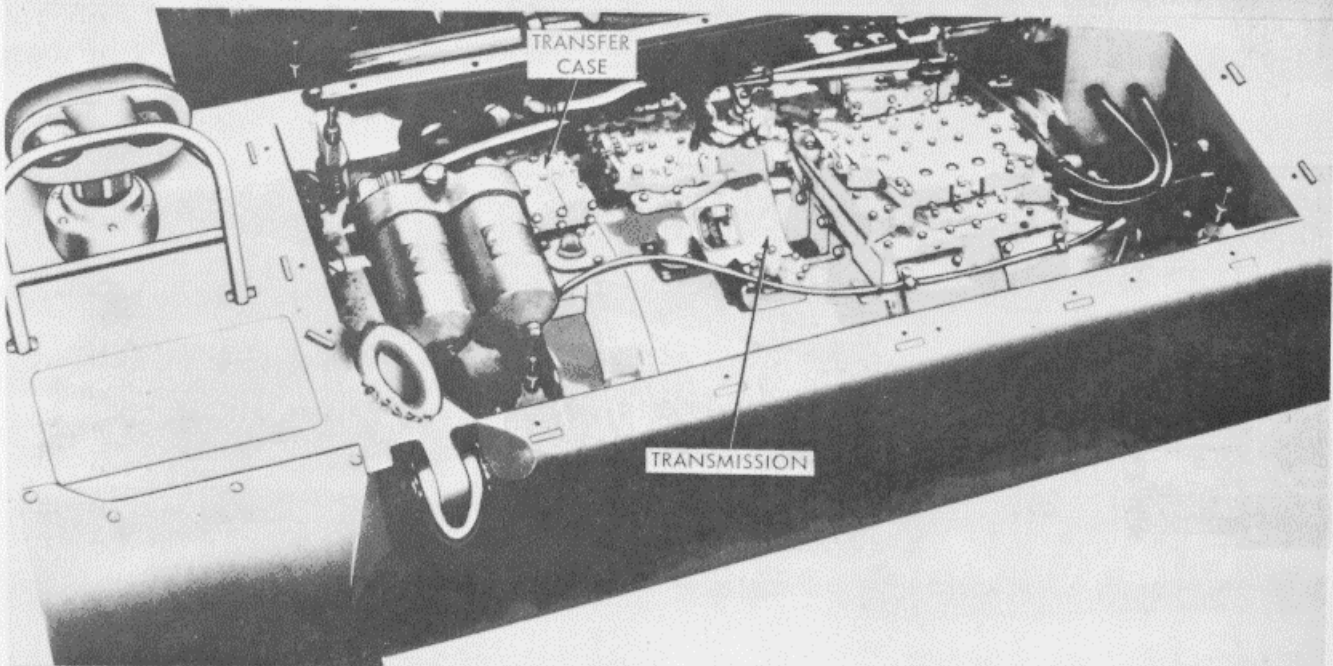
AT 11468

Figure 3-5. Destruction of miscellaneous materiel (1 of 3).

The items shown below must be smashed when destruction by burning, by gunfire, or by high-explosive ammunition would not result in their complete destruction.



J. INSTRUMENT PANEL, SWITCH PANEL, AND OPERATING CONTROLS.



K. TRANSMISSION AND TRANSFER CASE.

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Figure 3-6. Destruction of miscellaneous materiel (2 of 3).

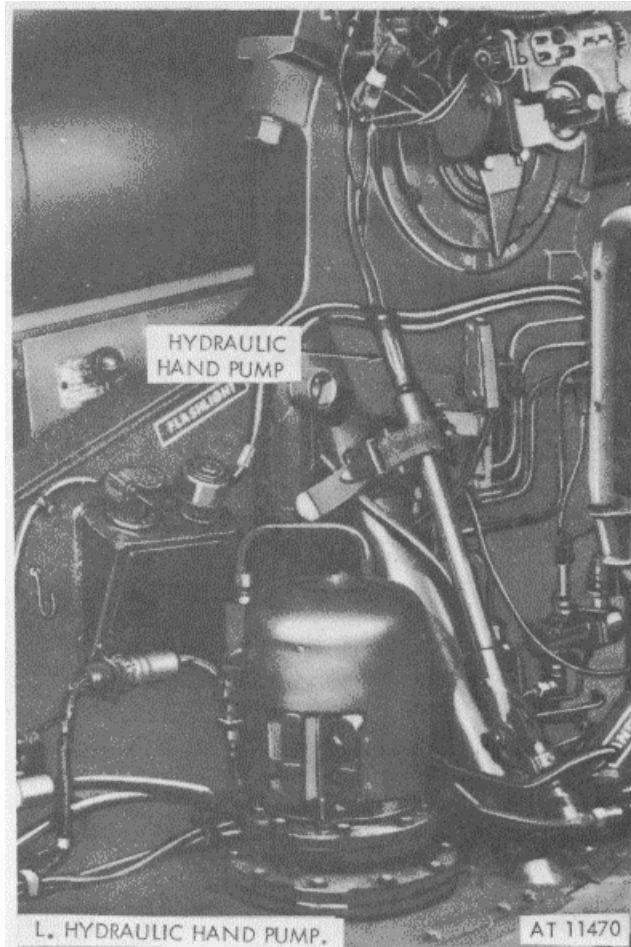


Figure 3-7. Destruction of miscellaneous materiel (3 of 3)

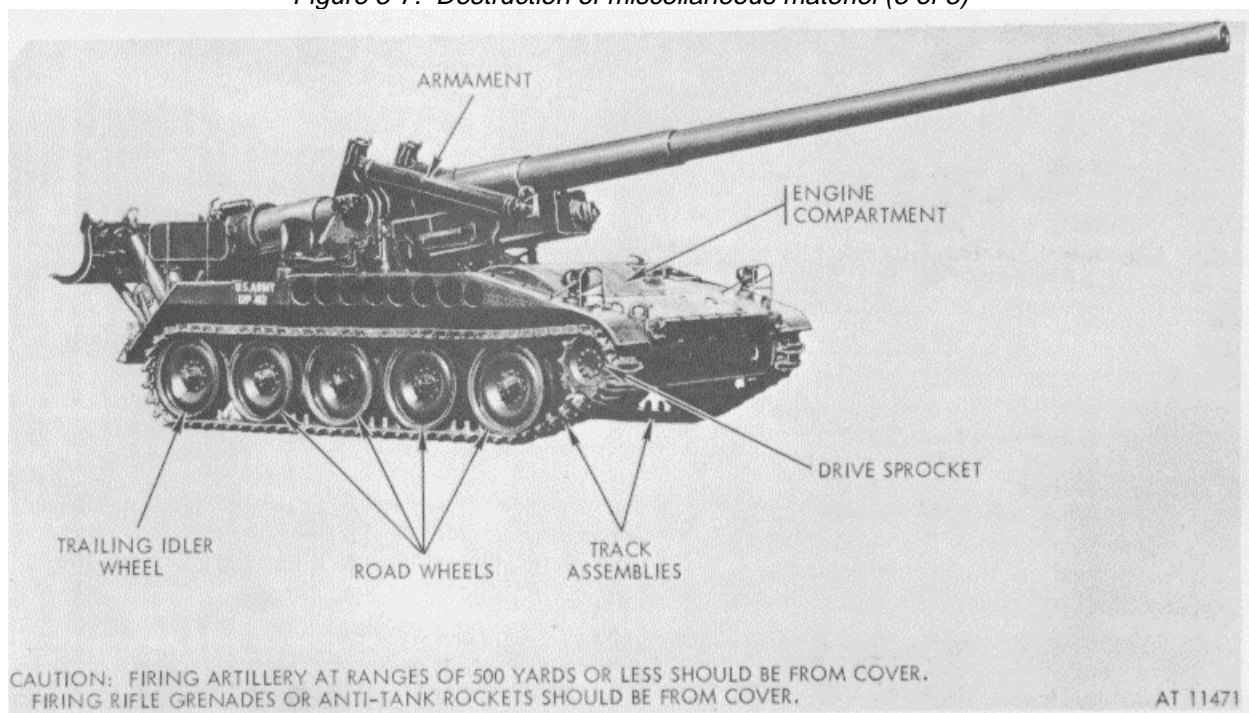


Figure 3-8. Destruction of vehicle-by gunfire.

3-3. Destruction of Armament

(fig. 3-3)

a. *General.* Armament should be destroyed simultaneously with the destruction of the vehicle unless restrictions of time, lack of personnel or materials prevent it. In the latter case, first priority shall be given to the destruction of the armament.

b. *8-Inch Howitzer Cannon M2A1E1, 175-MM Gun Cannon M113, and Mount Assembly M518.*

(1) Method No. 1 by demolition with HE ammunition (fig. 3-3). With the howitzer or gun at approximately 0-degree elevation, disconnect or break hydraulic lines at rear end of recoil cylinder and recuperator cylinder, and allow recoil fluid to drain completely. If available nearby, obtain a round of HE or HEAT ammunition (155mm or smaller, a HEAT rocket (3.5 inch or smaller), or an anti-tank rifle grenade, and proceed as follows: (a) Insert ammunition into muzzle end of howitzer or gun to a depth of at least 2 feet. As an alternative, an 8-inch or 175mm HE projectile, jammed in the muzzle of the 8-inch howitzer of 1, 5mm gun respectively, will be satisfactory. Load projectile, propelling charge, and primer into chamber of howitzer or gun.

(1) Fire weapon from cover, using lanyard at least 100 feet long. The danger area is approximately 250 yards or 300 meters.

Elapsed time: about 5 minutes.

(2) Method No. 2 by burning (incendiary grenades. With the howitzer or gun at approximately 0-degree elevation, destroy the howitzer or gun and mount as follows:

(a) Insert four incendiary grenades end-to-end midway in tube. Ignite grenades by means of a fifth one fitted with a time-blasting fuse of sufficient length so that it may be ignited either from the breech or muzzle end. It is usually easier to ignite fuse from the breech end. The metal from the incendiary grenades will fuse with the tube and fill the grooves.

NOTE

Time-blasting fuse burns at the rate of 1 foot in approximately 40 seconds. Test before using.

(b) Place four incendiary grenades on traversing and elevating control. Ignite grenades by means of a fifth one fitted with a time-blasting fuse.

(c) The time-blasting fuse should be of sufficient length so that after its ignition, personnel may safely leave the vehicle.

(d) Other weapons-by mechanical means. The other weapons carried in this vehicle, unless required for protection of troops during withdrawal, may be destroyed simultaneously with the vehicle. Using an axe, sledge, or other heavy implement, destroy the weapons by smashing of breech mechanisms, barrels, sighting equipment,

stocks, and mounts. If these weapons are used to cover withdrawal of troops, the weapons when subsequently abandoned, should be destroyed as indicated above.

Elapsed time: about 2 minutes.

3-4. Destruction of Vehicle

(figs. 3-4 through 3-8)

a. *General.* Although varying degrees of damage to the chassis and equipment of the M 110 Howitzer of M107 Gun may be expected incidental to the destruction of the howitzer or gun by the methods described below, complete destruction (vehicle, armament and equipment) requires that applicable parts of the procedure for destruction of the armament and equipment be coordinated with the method employed for the destruction of the chassis.

b. *Method No. 1-by burning (fig. 3-4).*

(1) Remove and empty portable fire extinguisher and discharge fixed fire extinguisher system.

WARNING

Exercise care when smashing vehicular batteries to avoid splashing acid on exposed skin. Place a tarpaulin, blanket or other cover over the batteries before smashing. If acid is splashed on the skin, flush the affected area immediately with large quantities of water. If acid is splashed into the eyes, flush immediately with water. Continue flushing for at least 15 minutes, and obtain medical attention.

(2) If quantities of combustibles are limited, smash all vital elements such as traversing gearbox, elevating gearbox, generator gearbox, headlights, starter, batteries, hydraulic pump motor, and loader and rammer (fig. 3-5). Destroy communication equipment by smashing with a heavy implement.

WARNING

To prevent severe electric shock, make sure the main power source is disconnected from the communications equipment before smashing.

(3) Smash engine block, engine cylinders, X-drive transmission, and instrument panel (fig. 3-6). Smash fuse setter, lockout cylinders, spade cylinders, and hydraulic handpump (fig. 3-7 1).

(4) If fuel is not readily available, drain fuel tanks, collecting fuel for use as outlined in 1,1 below.

(5) Open hydraulic drain valve.

(6) Open the tops of the propelling charge containers. Remove the propelling charges from the propellant container and place around the projectiles. If time permits, remove the eyebolt lifting plug from each projectile.

(7) With all doors and hatches open to admit air from combustion. pour fuel in and over entire

vehicle. Ignite by means of an incendiary grenade fired from a safe distance, by a burst from a flame thrower, by a combustible train of suitable length, or other appropriate means. Take cover immediately.

WARNING

Cover must be taken without delay because an early explosion of the ammunition (if present) may be caused by the fire. Due consideration should be given to the flammable nature of diesel fuel.

Carelessness in its use may result in painful burns. The danger zone, if explosive ammunition is present, is approximately 457 meters.

Elapsed time: about 6 minutes.

c. Method No. 2--Gunfire (fig. 3-8).

(1) Remove and empty the portable fire extinguisher and discharge fixed fire extinguisher system.

(2) Smash all vital elements as described in (2) above.

(3) Open hydraulic drain valve.

(4) Destroy M110 Howitzer or M104 Gun by gunfire, using adjacent tanks, self-propelled guns or howitzers, artillery, rifles using rifle grenades, or launchers using antitank rockets. Fire on M107 Howitzer or M 1 10 Gun aiming at the track-driving sprockets, road wheels, compensating wheels, tracks, engine compartment, and armament.

Although one well-placed direct hit may render the vehicle temporarily useless, several hits are usually required for complete destruction unless an intense fire is started, in which case the vehicle may be considered destroyed.

WARNING

Firing artillery at ranges of 500 yards or less should be from cover. Firing rifle grenades or anti-tank rockets should be from cover.

Elapsed time: about 6 minutes.

3-5. Priority for Destruction of Parts

In the event complete destruction of vehicle components cannot be accomplished in the time available, the priorities set forth by International Standardization Agreement-STAN AG-2 113, will be followed as directed below:

NOTE

Destroy all items marked No. 1, first, No. 2, second, No. 3 third, etc.

a. Vehicle.

(1) Injectors.

(2) Engine block and radiators.

(3) Tracks and suspension.

(4) Hydraulic systems.

b. Gun.

(1) Breech and breech mechanism.

(2) Recoil mechanism.

(3) Tube.

(4) Sighting and fire control equipment.

3-6. Destruction by Demolition (Carrier and Equipment)

a. General. Although varying degrees of damage to the armament and other equipment may be expected incidental to the destruction of a carrier as outlined below, complete destruction requires that applicable parts of procedures previously mentioned be coordinated with the methods employed for destruction of the carrier as outlined in b and c below.

b. Destruction by Mechanical Means.

(1) Remove and empty portable fire extinguisher, and discharge fixed fire extinguisher system.

WARNING

To prevent severe electric shock, make sure the main power source is disconnected from the communications equipment before smashing.

(2) Smash all vital elements such as fuel injectors, generator, lights, switches, instruments, engine block, engine cylinder heads, transmission, propeller shafts, and control differential. Destroy communications equipment by smashing it with a heavy implement.

(3) Drain fuel tank or puncture it as near the bottom as possible.

c. Demolition by Explosives.

NOTE

For the successful execution of destruction utilizing demolition materials, all personnel concerned will be thoroughly familiar with the pertinent provisions of FM 5-25.

Training and careful planning are essential.

(1) For power plant, control differential, and tracks, prepare seven 2-pound demolition charges, using 1-pound TNT blocks or equivalent together with necessary detonating cord to make up required charges. Place charges as follows:

(a) Set first charge on accessory drive housing at front end of engine.

(b) Set second and third charges on right and left sides of engine.

(c) Set fourth and fifth charges on right and left sides of control differential.

(d) Set sixth and seventh charges on right and left track drive sprockets.

(2) Connect all seven charges for simultaneous detonation with detonating cord.

(3) Provide for dual priming to minimize possibility of misfire. For complete details on use of demolition materials and methods of priming and detonating demolition charges, refer to FM 5-25.

Training and careful planning are essential.

Danger area is about 475 meters.

Elapsed time: about 10 minutes.

3-7. Destruction by Demolition (Bulldozer Blade)**NOTE**

The following instructions contain a method of destruction to be used only when the bulldozer blade is separate from the tank. If the bulldozer blade is assembled to the tank and both are to be destroyed, the charges described below for the destruction of the bulldozer blade should be connected for simultaneous detonation with the charges set for destruction of the tank.

a. Prepare six 2-pound charges of explosive, using 1-pound TNT blocks or equivalent together with the necessary detonating cord to make up the required charges. Place the charges as follows: 1) Set the first and second charges on the outer-tilt arm assemblies, on the left side and the other on the right side.

(2) Set the third and fourth charges on the hydraulic cylinder assemblies, one on the left side and the other on the right side.

(3) Set the fifth and sixth charges on the innertilt arm assemblies, one on the left side and the other on the right side.

b. Connect all six charges for simultaneous detonation.

CAUTION

Keep the blasting caps separated from the charges until required for use.

NOTE

For the successful execution of methods of destruction involving the use of demolition materials, all personnel concerned will be thoroughly familiar with the pertinent provisions of FM 5-25. Training and careful planning are essential.

c. Provide for dual priming to minimize the possibility of a misfire.

d. Detonate the charges from cover. The danger zone is approximately 250 yards or 300 meters.

Elapsed time: about 5 minutes.

3-8. Destruction by Demolition (M48A2 Tank and Armament)**NOTE**

The procedures outlined in paragraphs 3-8 a and 3-8b below require the use of demolition materials which normally may not be authorized items of issue to the using organization. The issue of these and related materials and conditions under which destruction will be effected are command decisions in each case, according to the tactical situation.

a. Armament.

Ordinarily the armament should be destroyed in conjunction with the destruction of the tank.

However, if limitations of time, personnel, and materials preclude simultaneous destruction of the tank and armament, priority will be given to destruction of the armament.

(1) *90-gun and combination gun mount method of demolition with demolition materials.* When planning for simultaneous detonation prepare and place demolition charges using 1-pound TNT blocks or equivalent to make up each charge, as follows:

Charge Location of charge

5 lb. Insert the charge into the chamber. Before closing the breechblock, insert an object, such as a hammer handle, in the breech opening to prevent damage to the detonating cord due to full closing of the breechblock.

3 lb. Insert the charge into the muzzle of the gun to a depth of about 18 inches. Plug the muzzle tightly with any available material, such as rags or mud, to a distance of about one foot.

2 lb. Place charge on the traversing and elevating mechanism.

Connect these charges for simultaneous detonation with detonating cord. For methods of detonating the charges, refer to paragraph 3-8 b (2), steps (e) through (g). The danger zone is approximately 250 yards or 300 meters, and elapsed time is about 6 minutes.

(2) *7.62-mm machine gun.* Demolition may be accomplished by one of the methods prescribed below.

(a) Method No. 1-by smashing. Using pick mattock, sledge or other heavy implement (such as spare barrel), smash the feed tray group, charger group, back plate assembly, cover assembly, receiver assembly, and barrel. Elapsed time: About 2 minutes.

(b) No. 2-by demolition. Proceed as follows:

1. Place the machine gun on the ground.

2. Prepare a 1-pound charge of explosive, TNT (using a 1-pound block or equivalent together with the necessary detonating cord) and place the charge on the receiver.

3. For priming, either a non-electric blasting cap crimped to at least 5 feet of time blasting fuse (time blasting fuse burns at the rate of 1 foot in approximately 40 seconds; test before using), or an electric blasting cap and firing wire may be used. Time blasting fuse and non-electric blasting caps must be protected from moisture at all times. The time blasting fuse may be ignited by a fuse lighter or a match; the electric blasting cap requires a blasting machine or equivalent source of electricity.

WARNING

Keep the blasting cap separated from the charges until required for use.

NOTE

For the successful execution method of destruction involving the use of demolition materials, all personnel concerned will be thoroughly familiar with the pertinent provisions of FM 5-25. Training and careful planning are essential.

4. Detonate the charge. If primed with non-electric blasting cap and time blasting fuse, ignite and take cover. If primed with electric blasting cap, take cover before firing the charge.

Elapsed time: About 2 minutes.

(c) Method No. 3-by burning (incendiary grenades). Proceed as follows:

1. Place the machine gun on the ground.
2. Raise the cover group.
3. Place an incendiary grenade on the barrel extension group.
4. Fire the grenade.

Elapsed time: About 2 minutes.

(3) Caliber .50 machine gun. Demolition may be accomplished by one of the methods prescribed below.

(a) Method No. 1-by smashing. Using pick mattock, sledge, or other heavy implement (such as spare barrel) smash the charger M10, back plate group, cover group, receiver group, and barrel.

Elapsed time: About 2 minutes.

(b) Method No. 2-by demolition. Repeat procedure given in paragraph a (2) (b) 1 through 3 above.

(c) Method No. 3-by burning (incendiary grenades). Repeat procedure given in paragraph a (2) (c) 1 through 4 above.

b. Tanks. Although varying degrees of damage to the armament of the combat tank may be expected incidental to the destruction of the tank as outlined below, complete destruction (tank and armament)

requires that applicable parts of the procedure for destruction of the armament be coordinated, with the method employed for the destruction of the tank. Perform the following:

(1) Remove and empty portable fire extinguisher and discharge the fixed fire extinguisher system.

(2) For the gun and mount, prepare and place charges as indicated in paragraph a (1) above.

(3) For the engine compartment, cross-drive transmission, and tracks, prepare six 2-pound demolition charges, using 1-pound TNT blocks or equivalent to make up each charge. Place the charges as follows:

(a) Set the first charge on the accessory end of the engine.

(b) Set the second and third charges on the engine; one on the left side and the other on the right side.

(c) Set the fourth charge between the engine and the cross-drive transmission.

(d) Set the fifth and sixth charges on the left and right track drive sprockets.

(4) Connect these six charges for simultaneous detonation.

(5) Provide for dual priming to minimize the possibility of a misfire.

(6) Connect all charges (the charges for the armament and the charges for the engine compartment, cross-drive transmission, and tracks) for simultaneous detonation.

(7) Detonate the charge-. For complete details on the use of demolition materials and methods of priming and detonating demolition charges, refer to FM 5-25. Training and careful planning are essential. The danger zone is approximately 250 yards or 300 meters and elapsed time is about 10 minutes.

Section II. TACTICAL VEHICLES AND EQUIPMENT

3-9. Typical Procedures for Destruction Tactical Vehicles

NOTE

Destroying tactical vehicles entails many duplicating procedures previously given in the combat area. However, it is considered essential that each area of procedural guidance be self-sustaining and independent.

This precludes misunderstanding and lack of information required to accomplish a specific function.

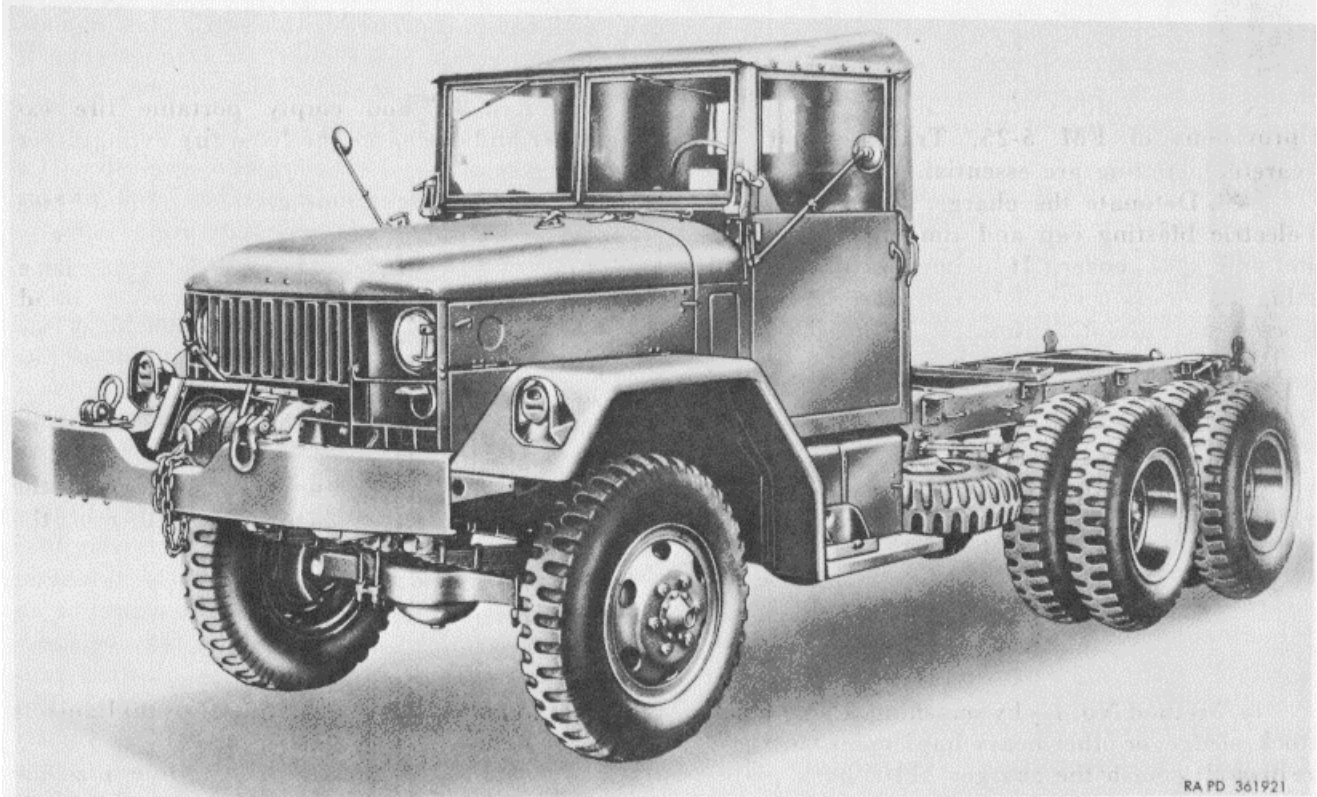
3-10. Destruction of Tactical Vehicle by Burning

a. Remove and empty portable fire extinguishers.

b. Using an axe, pick mattock, sledge, or other heavy implement, smash all vital elements such as alternator, fuel injector pump, air cleaner, lights, instruments, and controls. If time permits, and a sufficiently heavy implement is available, smash the engine cylinder block and head, transmission and power transfer case.

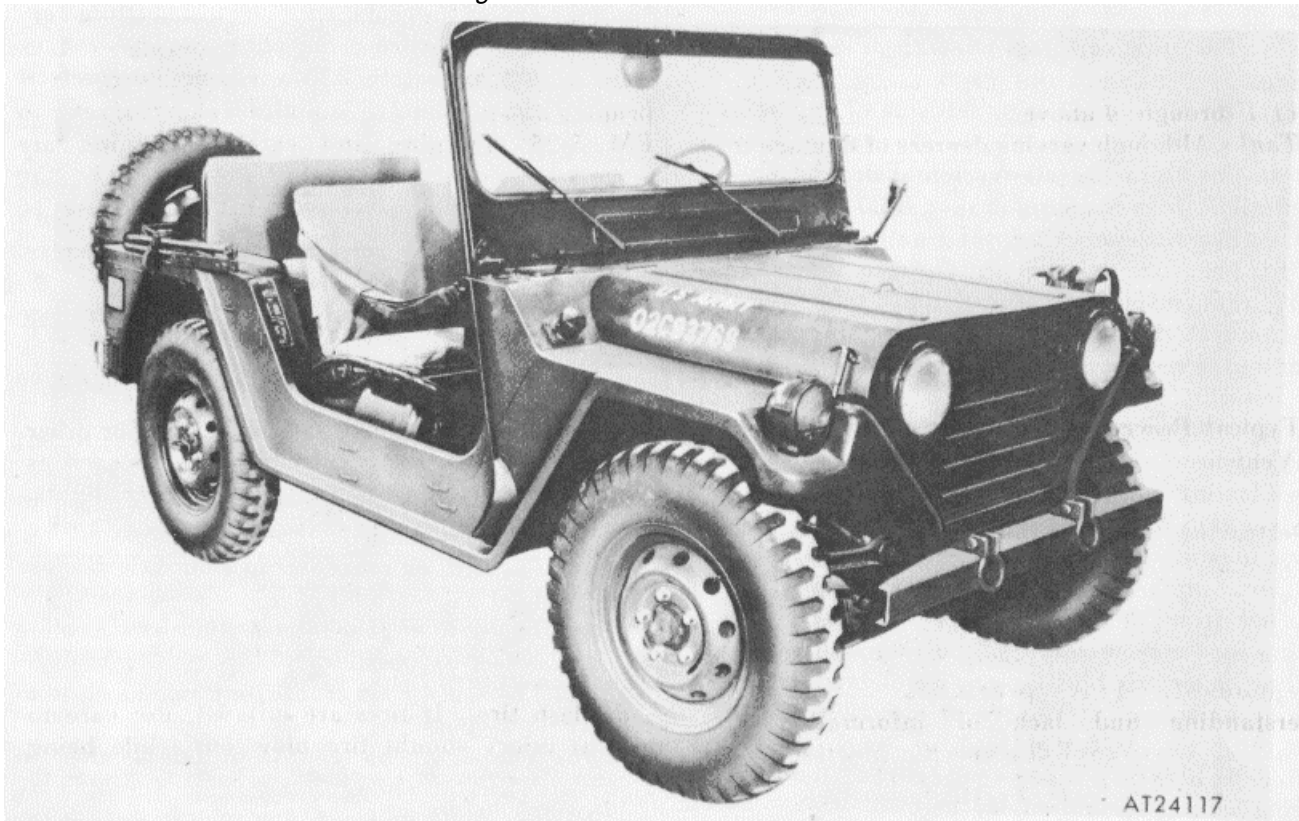
c. Remove fuel tank drain plug, collecting fuel for use as outlined in below.

d. Slash tires. If tires are inflated, use care to prevent injury should tire blow out while being slashed. Whenever practicable, it is preferable to deflate tires before slashing.



RA PD 361921

Figure 3-9. Truck-tactical vehicle.



AT24117

Figure 3-10. Truck, utility, 1/4-ton—tactical vehicle.

e. Explosive ammunition, if available nearby, should be removed from packing or protective material. Place ammunition in or about the vehicle so that it will be fully exposed to the fire and in such locations that the greatest damage will result from its detonation.

f. Pour fuel and oil in and over entire vehicle. Ignite by means of an incendiary grenade fired from a safe distance; a burst from a flame thrower, a combustible train of suitable length, or other appropriate means. Take cover immediately. If fuel and oil are not available, use other flammable such as oily rags or waste wood, or paper. Ignite by means of incendiary grenades or other suitable means.

CAUTION

Cover must be taken without delay since an early explosion of the ammunition, if present, may be caused by fire. Due consideration should be given to the highly flammable nature of fuel and its vapor.

Carelessness in its use may result in painful burns.

Elapsed time: about six minutes.

3-11. Special Demolition Instructions for GOER Vehicle

a. Prepare seven 1-pound demolition charges using 1-pound TNT blocks or equivalent with necessary detonating cord to make up each charge.

Place the charges as follows: (1) The first on top of transmission case housing.

(2) The second as low on left side of engine as possible.

(3) The third on left rear final drive.

(4) The fourth on right rear final drive.

(5) The fifth on left front final drive.

(6) The sixth on right final drive.

(7) The seventh on top of the hitch.

b. Connect the seven charges for simultaneous detonation. Provide for dual priming to minimize the possibility of misfire.

c. For priming use either a non-electric blasting cap crimped to at least 5 feet of time blasting fuse (time blasting fuse burns at a rate of 1 foot in approximately 40 seconds; test before using) or an electric blasting cap and firing wire. Time blasting fuse and non-electric blasting caps must be protected from moisture at all times. The time blasting fuse may be ignited by a fuse lighter or a match. The electric blasting cap requires a blasting machine or equivalent source of electricity.

WARNING

Keep blasting caps separated from charges until required for use.

d. Destroy tires as outlined in paragraph 3-10 d.

e. Detonate the charges. If primed with non-

electric blasting cap and time blasting fuse, ignite and take cover. If primed with electric blasting cap, take cover before firing charges. Danger zone is approximately 250 yards or 300 meters.

3-12. 1/4 to 1 1/4 Ton Truck

a. Prepare two 2-pound charges of explosive (two 1-pound TNT blocks or equivalent, per charge together with the necessary detonating cord to make up each charge).

Set the charges as follows:

(1) The first on top of the clutch housing.

(2) The second as low on the left side of the engine as possible.

(3) Connect the two charges for simultaneous detonation. Provide for dual priming to minimize the possibility of a misfire.

(4) For priming either a non-electric blasting cap crimped to at least 5 feet of time blasting fuse (time blasting fuse burns at the rate of 1 foot in approximately 40 seconds; test before using) or an electric blasting cap and firing wire may be used.

Time blasting fuse, and non-electric blasting caps must be protected from moisture at all times. The time blasting fuse may be ignited by a fuse lighter or a match; the electric blasting cap requires a blasting machine or equivalent source of electricity.

b. Destroy the tires as outlined in 3-10 d above.

c. Detonate the charges. If primed with nonelectric blasting cap and time blasting fuse, ignite and take cover. If primed with electric blasting cap, take cover before firing the charges. The danger zone is approximately 250 yards or 300 meters.

Elapsed time: about 5 minutes.

3-13. 2-1 / 2-10-Ton Truck

a. Prepare eleven 1-pound demolition charges using 1-pound TNT blocks or equivalent with necessary detonating cord to make up each charge.

Place the charges as follows: (1) The first on top of transmission case housing.

(2) The second as low on left side of engine as possible.

(3) The third on rear-rear axle as close to left wheel as possible.

(4) The fourth on rear-rear axle as close to right wheel as possible.

(5) The fifth on rear-intermediate axle as close to left wheel as possible.

(6) The sixth on rear-intermediate axle as close to right wheel as possible.

(7) The seventh on front-front axle as close to left wheel as possible.

(8) The eighth on front-front axle as close to right wheel as possible.

(9) The ninth on front-intermediate axle as far to the right as possible.

(10) The tenth on front-intermediate axle as far to the left as possible.

(11) The eleventh on the fuel tank as low as possible.

b. Connect the eleven charges for simultaneous detonation. Provide for dual priming to minimize the possibility of a misfire.

c. For priming, use either a non-electric blasting cap crimped to at least 5 feet of time blasting fuse (time blasting fuse burns at rate of 1 foot in approximately 40 seconds; test before using) or an electric blasting cap and firing wire. Time blasting fuse and non-electric blasting caps must be protected from moisture at all times. The time blasting fuse may be ignited by a fuse or a match.

The electric blasting cap requires a blasting machine or equivalent source of electricity.

d. Destroy tires as outlined in 3-10 d above.

e. Detonate the charges. If primed with nonelectric blasting cap and time blasting fuse, ignite and take cover. If primed with electric blasting cap, take cover before firing charges. Danger zone is approximately 250 yards or 300 meter.

Elapsed time: about 6 minutes.

WARNING

Keep the blasting caps, detonating cord, and time blasting fuses separated from the charges until required for use.

NOTE

For the successful execution of methods of destruction involving the use of demolition materials, all personnel concerned must be thoroughly familiar with the pertinent provisions of FM 5-25. Training and careful planning are essential.

f. Destruction by gunfire.

(1) Remove and empty portable fire extinguishers.

(2) Destroy tires as outlined in 3-10 d. above or by placing incendiary grenades under each tire.

(3) Destroy the vehicle by gunfire, using artillery, machine guns, rifles using rifle grenades, or launchers using anti-tank rockets. Fire on the vehicle, aiming at the engine, axles, wheels, and chassis, as well as any exposed auxiliary equipment.

Although one well placed hit may render the vehicle temporarily useless, several hits are usually required for complete destruction unless an intense fire is started, in which case the vehicle may be considered destroyed.

WARNING

Firing artillery at ranges of 500 yards or less should be from cover. Firing rifle grenades or anti-tank rockets should be from cover.

g. Destruction by mechanical means. Perform operation as indicated in paragraph 3-10 b, c, and d above; also, puncture fuel tanks in several places.

3-14. Destruction of Trailers and Semitrailers

a. *Method Number 1-By Burning.*

(1) Fire extinguishers. Refer to paragraph 3-13f(1).

WARNING

To prevent possible serious injury, bleed the air pressure from air reservoirs and chambers BEFORE smashing.

(2) Using axe, pick mattock, sledge, or other heavy implement, smash all vital elements that are part of the specific vehicle, such as the lights, air lines, air reservoir, air chamber, intervehicular cable receptacle, kingpin, air hose coupling, switches, and handbrake assemblies.

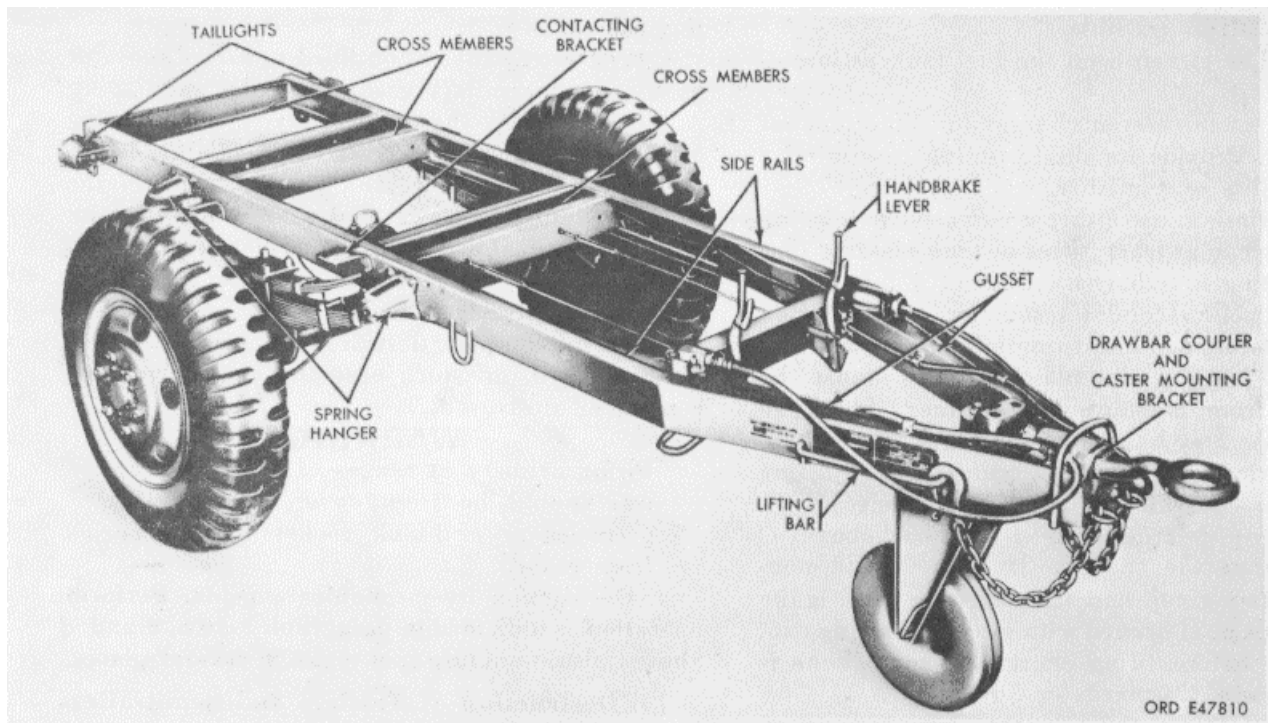


Figure 3-11. 1 1/2-ton, 2-wheel, trailer chassis

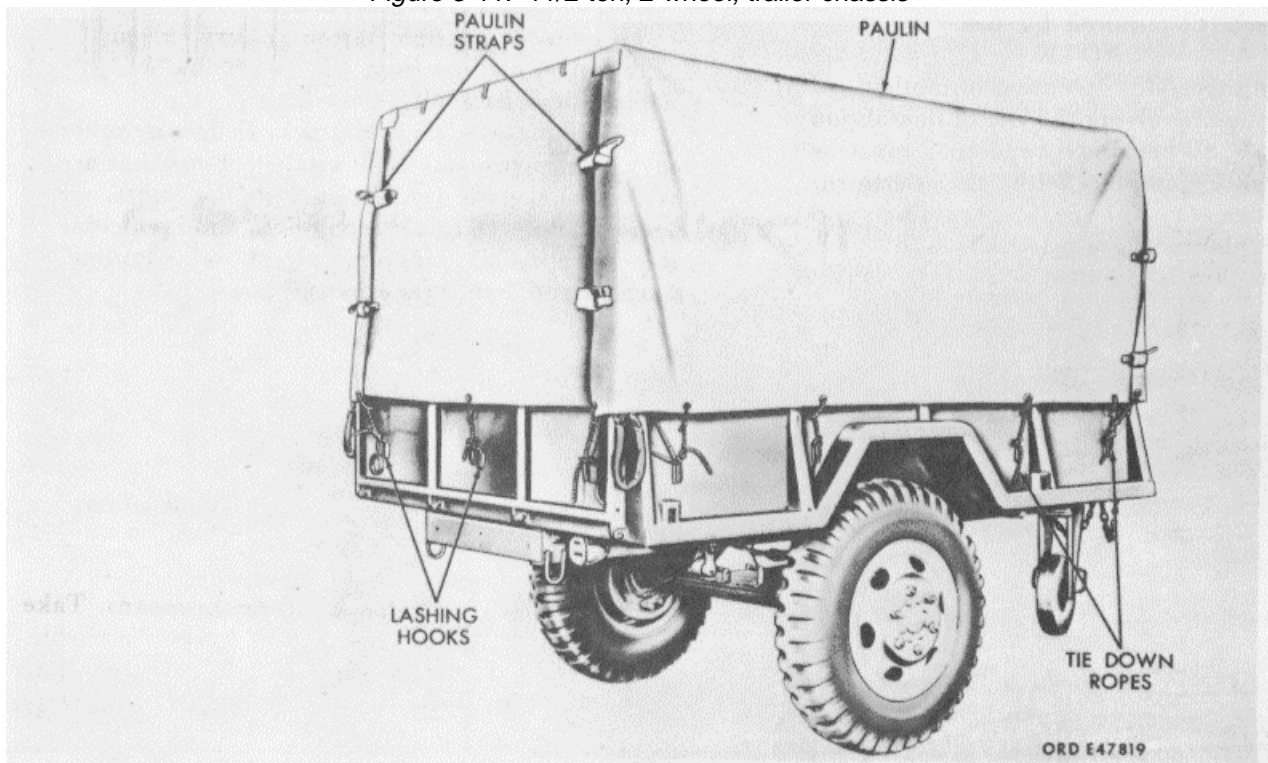


Figure 3-12. 1 1/2-ton, 2-wheel, cargo chassis.

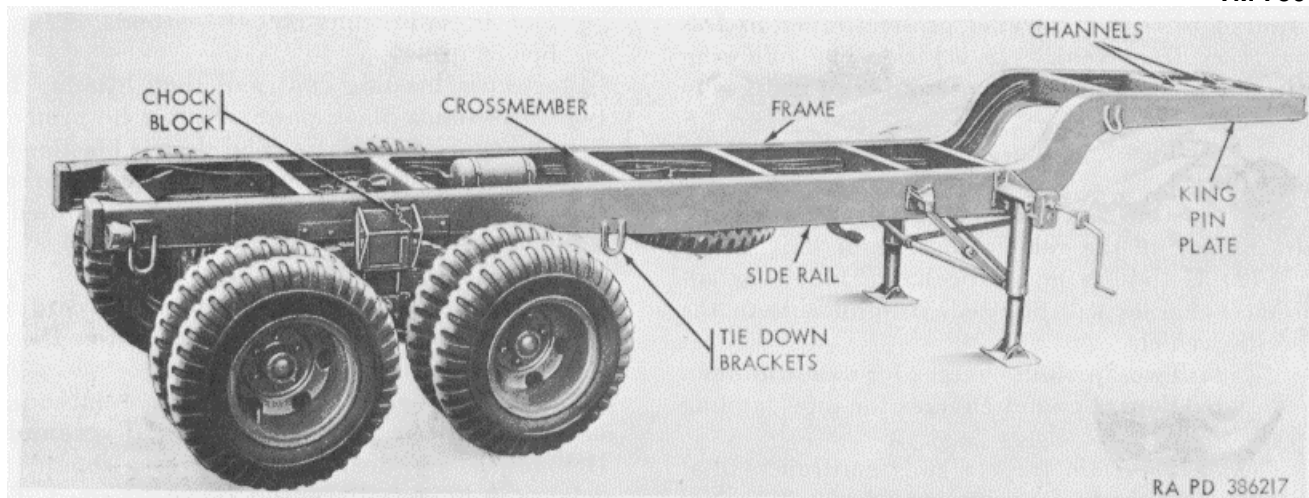


Figure 3-13. 4-wheel, semitrailer chassis.

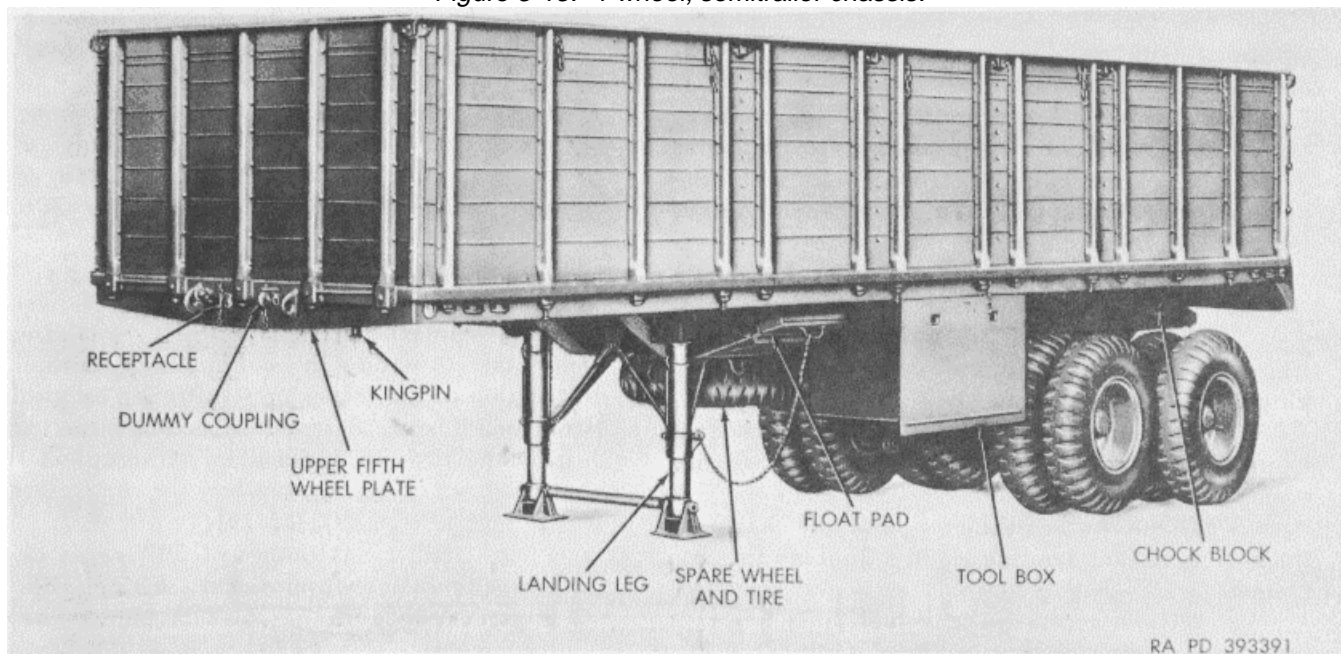


Figure 3-14. 4-wheel, stake semitrailer.

(3) Slash Tires. If tires are inflated, use care to prevent injury should tire blow out while being slashed. Whenever practicable, it is preferable to deflate tires before slashing.

(4) Explosive ammunition, if available nearby, should be removed from packing or protective material. Place ammunition in or about the vehicle so that it will be fully exposed to the fire and in such locations that the greatest damage will result from its detonation.

(5) Combustibles. Pour fuel and oil in and over entire vehicle. Ignite by means of an incendiary grenade fired from a safe distance; a burst from a flame thrower, a combustible train of

suitable length, or other appropriate means. Take cover immediately. If fuel and oil are not available, use other flammables such as oily rags or waste wood, or paper. Ignite by means of incendiary grenades or other suitable means.

CAUTION

Cover must be taken without delay since an early explosion of the ammunition, if present, may be caused by fire. Due consideration should be given to the highly flammable nature of fuel and its vapor. Carelessness in its use may result in painful burns.

Elapsed time: about six minutes.

b. *Method Number 2-By Demolition.*

(1) The number of demolition charges required to render a trailer or semitrailer useless may vary from vehicle to vehicle. The following criteria specify the minimum number of charges to be used:

(a) Two 2-pound charges for each axle on the vehicle.

(b) One 2-pound charge for the towing attachment on the vehicle (lunette or kingpin).

(2) If time is not critical, the following additional charges will be used, if applicable to the specific vehicle:

(a) Two 2-pound charges for axle trunnion.

(b) Four 2-pound charges for dual landing legs.

(3) For certain trailers and semitrailers that require additional charges to destroy special components and auxiliary equipment the following are required:

(a) One 2-pound charge for fuel or water tank vehicles.

(b) One 2-pound charge for vehicles equipped with auxiliary engines and centrifugal dispensing pumps.

(4) Planning for simultaneous detonation, prepare the 2-pound charges using two 1-pound TNT blocks, or equivalent, together with the necessary detonating cord to make up each charge.

Set the required charges as follows:

(a) One charge at each end of each axle, as close as possible to the wheels.

(b) One charge at the apex of the trailer A frame adjacent to the lunette or on the semitrailer kingpin.

(c) One charge at each end of the axle trunnion as close as possible to the spring suspension system.

(d) One charge at the top, and one charge at the bottom of each landing leg in a dual landing leg system .

(e) Open access cover of fuel tank or water tank and set one charge inside of tank. If using non-electric blasting caps, insure that the junction between cap and detonating cord is coated with water proofing compound to prevent possible misfires. Block access cover partially open to avoid severing the detonating cord.

(f) For vehicles equipped with auxiliary engines and centrifugal dispensing pumps, place one charge between the auxiliary engine cabinet and the dispensing pump.

(5) Connect all charges for simultaneous detonation.

(6) Provide for dual priming, to minimize the possibility of a misfire. For priming, use either an electric blasting cap and firing wire or a non-electric blasting cap crimped to at least 5 feet of time blasting fuse.

NOTE

Time blasting fuse burns at the rate of one foot in approximately 40 seconds. Test before using.

Non-electric blasting caps and time blasting fuse (which contains black powder) must be protected from moisture at all times. The electric blasting cap requires a blasting machine or equivalent source of electricity; the time blasting fuse may be ignited by a fuse ignited or a match.

WARNING

Keep the blasting caps, detonating cord, and time blasting fuse separate from the charges until required for use.

(7) Destroy tires by placing an incendiary grenade under each tire. Fire grenades.

Detonation of demolition charges should be delayed until incendiary fires are well started. This will reduce the possibility of fires being extinguished by blast when charges are detonated.

(8) Detonate the charges. If primed with electric blasting cap, take cover before firing the charges. If primed with non-electric blasting cap and time blasting fuse, ignite and take cover.

CAUTION

Cover must be taken without delay, since an early explosion of the charges may be caused by the incendiary fires. The danger zone is approximately 250 yards or 300 meters.

Elapsed time: about 5 minutes.

c. *Method Number 3-By Gunfire.*

(1) Ordinarily, destruction of tires is affected incidental to and in conjunction with, the destruction of the trailer or semitrailer by gunfire.

However, if such destruction is not practicable, destroy the tires as directed in paragraph 3-10 d above.

WARNING

Firing artillery at ranges of 500 yards or less should be from cover. Firing rifle grenades or antitank rockets should be from cover.

(2) Destroy the trailer or semitrailer by gunfire, using artillery, rifles using rifle grenades, or launchers using anti-tank rockets. Fire on the vehicle, aiming at the wheels, axles, and body.

Although one well-placed direct hit may render the vehicle temporarily useless, several hits are usually required for complete destruction unless an intense fire is started, in which case the vehicle may be considered destroyed.

Elapsed time: about 5 minutes.

3-15. Destruction of Semitrailer Electronic

a. Destruction by Burning.

WARNING

Disconnect main power cable from

semitrailer before proceeding with any of the following methods of destruction.

(1) Use sledges, axes, hammers, crowbars, and any other heavy tools available to smash the automatic test equipment. First remove the cover plates; then smash all the subassemblies.

(2) Use axes and machetes to cut cabling, cording and wiring. Cut cables in a number of places. If time permits, cut each of the cable connectors, and smash them with a heavy implement.

(3) Burn the instruction literature first. Burn as much of the equipment as is flammable, using gasoline, oil, flame throwers, etc. Pour gasoline on the cut cables and the semitrailer wheels and ignite them.

b. *Destruction by Demolition.*

WARNING

Extreme caution must be observed in the use of explosives and incendiary devices.

Personnel handling them must be familiar with the provisions of FM 5-25.

(1) Electronic assemblies. Because of the construction of the van electronic assemblies, destruction by use of explosives is considered the least desirable and also the most time-consuming.

(2) Semitrailer Van. Prepare three 2-pound demolition charges using two 1-pound TNT blocks or equivalent per charge together with the necessary detonating cord to make up each charge. Place the charges as follows:

(a) Place the first charge on the axle as close as possible to the right spring.

(b) Place the second charge on the axle as close as possible to the left spring.

(c) Place the third charge on the gooseneck as close as possible to the kingpin.

(3) Connect the three charges for simultaneous detonation with detonating cord.

(4) Provide for dual priming to minimize the possibility of a misfire.

(5) Destroy the tires by placing an incendiary grenade next to each tire or fasten a grenade to each tire. Fire the grenade. The detonation of the demolition charges should be delayed until the incendiary fires are well started. This will prevent the fires from being extinguished by the blast when the charges are detonated.

(6) Provide dual priming to minimize the possibility of a misfire. Use a non-electric blasting cap crimped to a safety fuse or an electric blasting cap and firing wire, as outlined in FM 5-25.

Detonate the charges. If the charges are primed with a non-electric blasting cap and a safety fuse, ignite the safety fuse and take cover. If the charges are primed with an electric blasting cap, take cover before firing.

WARNING

Cover must be taken without delay, since an early explosion of the demolition charges may be caused by the incendiary fires. The danger area is approximately 250 yards or 300 meters.

Elapsed time: about 8 minutes.

APPENDIX A

REFERENCES

TM-9-1375-200
FM-5-25

Demolition Materials
Explosives and Demolitions

By Order of the Secretary of the Army:

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