



## DEFENSE DEMILITARIZATION PROCEDURAL GUIDANCE

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**Originating Office:** Defense Demilitarization Program Office

**Effective:** December 9, 2022

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**Purpose:** This guidance for Demilitarization (DEMIL) of DoD personal property supports the requirement of DoD Manual 4160.28 Volume 2, Defense Demilitarization: Demilitarization Procedures, November 1, 2022.

Changes to this guidance must be coordinated and approved by the DoD DEMIL Program Manager, Mr. James L. Reed, (James.L.Reed@dla.mil)

## ***CHANGE HISTORY***

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## **DEMIL PROCEDURAL GUIDANCE**

### **3A.1. INTRODUCTION.**

This document provides selected procedural guidance regarding the method and degree of DEMIL.

### **3A.2. USE OF THIS GUIDANCE.**

The following sections correspond to their respective DEMIL Coding tables also posted at <https://www.dla.mil/Working-With-DLA/Federal-and-International-Cataloging/DEMIL-Coding/DEMIL-Codes/>. For items that are not specifically identified, follow local procedures for proper physical DEMIL of item in accordance with DEMIL code requirements. Items with DEMIL required DEMIL codes must be destroyed by cutting, crushing, shredding, melting, or burning or by any other method as appropriate to preclude restoration for further use.

### **3A.3. FIREARMS, CLOSE ASSAULT WEAPONS AND COMBAT SHOTGUNS**

a. This section corresponds to DEMIL Coding Table 3.

b. DEMIL Code “D” Items. The preferred method of DEMIL for items assigned code “D” is melting. An alternate DEMIL method is crushing by hydraulic pressure, or torch cutting, utilizing a cutting tip displacing 1/2 inch of metal at a minimum. All cuts must completely sever the item, in accordance with instructions applicable to the items being demilitarized, as shown in the examples in [Figures 3](#), [4](#), and [5](#). Shearing, crushing, shredding, or melting may be utilized when such methods of DEMIL are deemed cost effective or practicable and when authorized by the appropriate authority or the DoD DEMIL Program Manager (DDPM).

(1) Machine Guns. Machine guns should be demilitarized by melting, crushing by hydraulic pressure, or by torch cutting utilizing a cutting tip that displaces 1/2 inch of metal at a minimum, or by shearing the receiver in a minimum of two places, or by crushing in a hydraulic or similar type press. [Figures 3](#) through [5](#) illustrate the proper method of cutting a machine gun. The barrel should be torch cut, sheared, or crushed in the chamber area and in two or more places to the extent necessary to prevent restoration to a useable condition. If shearing or crushing methods are used, the trunnion blocks and side frames must be completely cut through, broken, or distorted to preclude restoration to a usable condition.

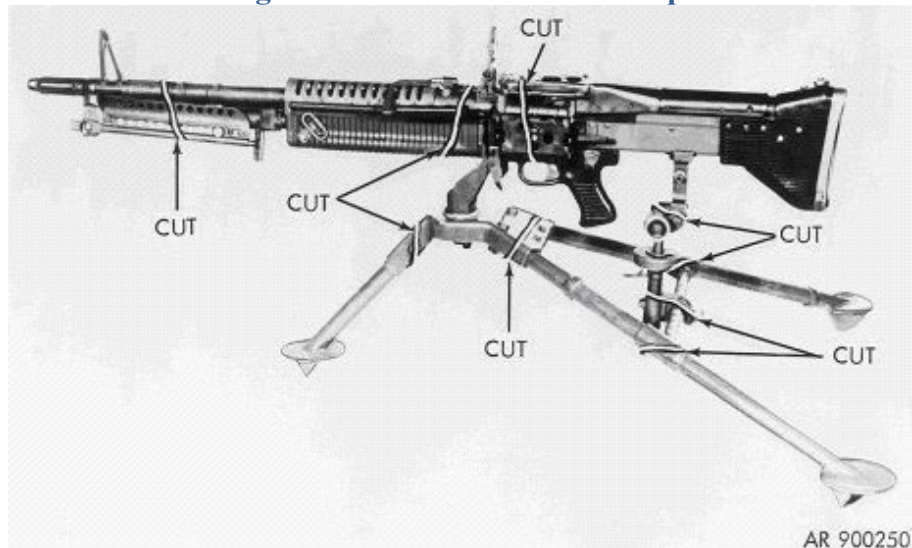
(2) Receivers. Receivers should be demilitarized by melting; or by crushing by hydraulic pressure, rotary shredding; or by shearing; or by torch cutting in a minimum of two places completely through the receiver as shown in [Figures 4](#) and [5](#), utilizing a cutting tip that displaces 1/2 inch of metal at a minimum; or by crushing in a hydraulic or similar type press to preclude restoration to a usable condition.

(3) Bolts and Barrels. Bolts and barrels should be demilitarized by melting or crushing by hydraulic pressure, torch cutting utilizing a cutting tip that minimally displaces 1/2 inch of metal or crushed to the extent necessary to preclude restoration to a usable condition. Barrels should be demilitarized by cutting (rotary shredding, hydraulic pressure, shearing, or torching utilizing a cutting tip that displaces at least 1/2 inch of metal). At least three cuts must be made with at least one cut through the chamber area. All barrels must have a torch cut along the length of the barrel at the chamber end. The chamber cut must be at least one wall thickness of the barrel and cut through the entire length of the chamber. Cuts must be made completely through the barrel. Bolts must be demilitarized by cutting (shear or torch) in a minimum of two places. A torch-cutting tip that displaces at least 1/2 inch of metal must be used and cuts must be made completely through the bolt.

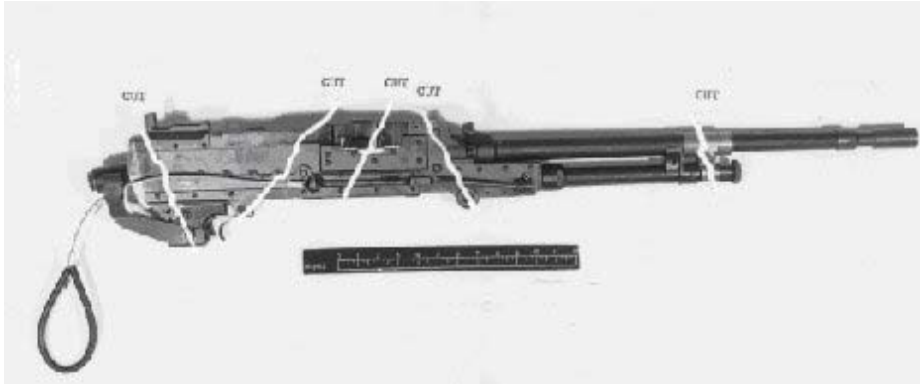
(4) Accessories. Accessories, including silencers, suppressors, mufflers, rifle scopes and military telescopic and optical sights including those designed for night sighting and viewing, and gun mounts (including bipods and tripods), must be demilitarized by melting, breaking, crushing, or cutting in a manner that precludes restoration to a usable condition, in accordance with instructions applicable to the items being demilitarized as shown in Figures 3 and 6.

c. DEMIL Code “C” Key Point Items. Some examples of key points include, but are not limited to, attachment points, fittings, moveable joints, lenses, and infrared (IR) sources.

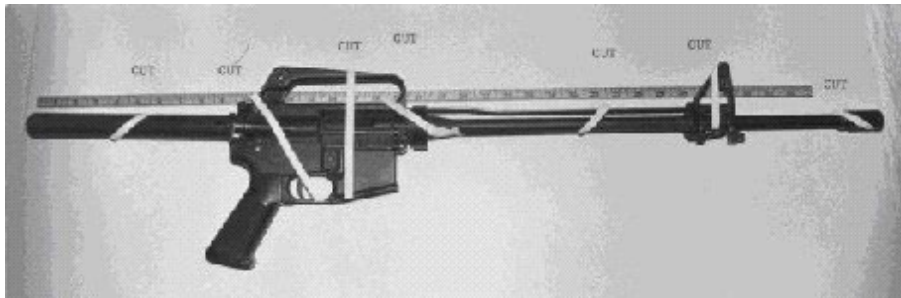
**Figure 1. Machine Gun with Tripod**



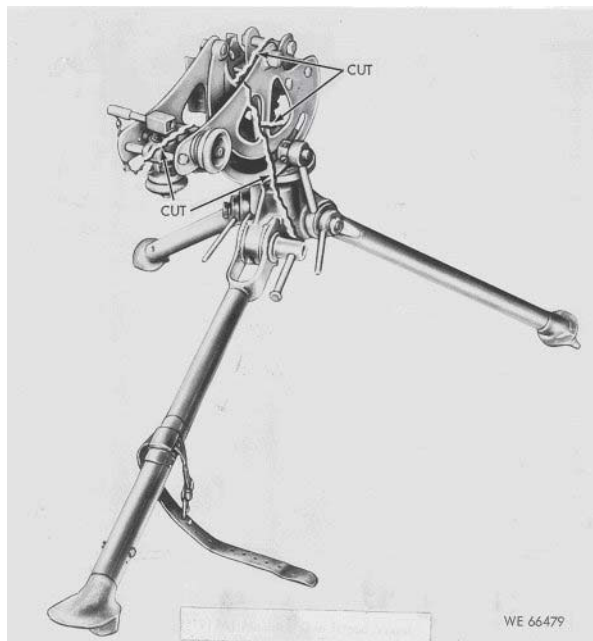
**Figure 2. 7.62mm Coaxial Machine Gun**



**Figure 3. Assault Rifle**



**Figure 4. Machine Gun Tripod Mount**



### **3A.4. GUNS AND ARMANENT**

a. This section corresponds to DEMIL Coding Table 4.

b. DEMIL Code “D” Items. All DEMIL code “D” items must be destroyed by cutting, burning, breaking, crushing, etc., as appropriate to preclude restoration for further use as an item or for identification and association of related parts. It is preferable to DEMIL all items to the level of scrap.

(1) Breechings, Breech Chambers, Breech Couplings, Breechblocks, Breech Housings, Breechyokes, Breechplugs, and Firing Mechanisms. These items must be cut through with the breechblock in the closed position (as shown in [Figure 7](#)) and through the firing mechanism (as shown in [Figure 8](#)). Equivalent cutting of the breechring, breech chambers, breechblock, and firing mechanism as separate items is acceptable.

(2) 20mm Guns. 20mm guns must be demilitarized by torch cutting utilizing a cutting tip that displaces 1/2 inch of metal at a minimum, as shown in [Figure 7](#):

(a) Cut through the body of the receiver to the rear of the cradle with the bolt assembly remaining in the weapon if furnished with the assembly.

(b) Cut through the heavy portion of the barrel, the gas operating system, and recoil spring.

(c) Torch the chamber opening in the barrel and forward portion of the bolt, if assembled in weapons, sufficiently to create a metal puddle.

(d) Cut, shear, or crush the 20mm feeder.

(3) Receivers (30mm guns). Receivers must be cut into three sections by cutting through the barrel support section, with a second cut through the slideways.

(4) Receiver Casings. Receiver casings must be cut completely through the casing body assembly near the rammer tray.

(5) Barrels (Guns and Howitzer). Barrels must be cut into two pieces; the cut being made as near the point of origin of the rifling as possible but not more than one-third of the barrel length from the breech face of the tube as shown in [Figure 8](#). Combat vehicle artillery must be cut just in front of the mantelet or shield.

(6) Trunnions, Trunnion Bearings, and Trunnion Bearing Caps (not disassembled). Trunnions, trunnion bearings, and trunnion bearing caps (not disassembled) must be cut completely through diagonally.

(7) Mortars. Mortars must be or crushed as shown in [Figure 9](#).

(a) When the cutting method is used, the tube must be cut into two pieces, the cut being made one-third of the length of the tube from the cap end. The cap must be cut into three pieces, the cut being made diagonally through the cap.

(b) When the crushing method is used, the mortar tube must be crushed so that the inner surfaces of the tube touch for a distance of 8 inches, extending from the base cap end toward the muzzle end of the tube. The base cap must be crushed until the largest diameter of the cap is out of round by a minimum of 1 inch.

(8) Military Flame Thrower Mechanisms. Military flame thrower mechanisms must be cut, crushed, or broken.

(9) Top Carriages, Bottom Carriages, Mounts, and Outriggers. Top carriages, bottom carriages, mounts, and outriggers must be cut through below the trunnion bearings.

(10) Turret Rings. Turret rings must be cut in half utilizing a cutting tip that displaces 1/2 inch of metal at a minimum.

c. DEMIL Code “C” Key Point Items. Some example of key points include, but are not limited to, tubes and gun barrels, muzzle brakes, flame hidens, launching rails, receivers, breechblocks, breech chambers, breech couplings, breechrings, breech housings, breechyokes, breechplugs, trunnion blocks, firing mechanisms, feeder mechanisms, release mechanisms, equilibrators, recoil mechanisms, recuperator mechanisms, torpedo tube muzzle and breechdoors, turret rings, flame thrower operating mechanisms, gun mounts, and carriages (see paragraph (b) for more examples of key points).

d. DEMIL Code “F” Items.

(1) Hydropneumatic Recoil and Equilibrator Mechanisms

(a) DEMIL of recoil mechanisms and equilibrators must be accomplished by qualified personnel only.

(b) Prior to release of hydropneumatic recoil or equilibrator mechanisms (which in a broad sense includes counter-recoil (recuperator) mechanisms) to a disposal activity, reserve oil must be drained, and nitrogen pressure released by technically qualified personnel in accordance with instructions in the pertinent technical manuals.

(c) Oil and nitrogen release valves and drain plugs must be left open during cutting operations.

(d) If the nitrogen pressure cannot be released due to a faulty valve, a 1/8-inch hole must be drilled by technically qualified personnel in the wall of the nitrogen cylinder 6 inches from the nitrogen end, as shown in [Figure 12](#), to release the pressure.

(e) Extreme caution should be exercised while drilling the hole in the nitrogen cylinder wall. A suitable safety shield should be used to protect personnel from the drill shavings that are expelled from the hole when the drill bit enters the nitrogen cylinder.



Protection should also be provided for eyes, face, arms, and hands of personnel performing the operation.

(f) To prevent a possible internal buildup of oxygen and acetylene in the nitrogen cylinder during cutting operations, a 1/2-inch hole must be drilled 6 inches from the end of the nitrogen cylinder as shown in [Figure 13](#). To perform this operation on the 155mm, 175mm, and 8-inch howitzer mechanisms, a section of the cover or housing must be cut away.

(g) Enlarge the 1/2-inch hole with a gas-cutting torch by removing a section of at least 2 square inches from the nitrogen or recuperator cylinder as shown in [Figures 12](#) and [13](#). If qualified explosives personnel are available, a satisfactory hole can be made by the use of shaped charge instead of drilling and cutting with a torch.

(h) The recoil rod and counter-recoil rod, if present, must be cut completely through and flush with the recoil and counter-recoil cylinder as shown in [Figure 14](#). Hydropneumatic equilibrators such as those on the 155mm and 175mm guns and 8-inch howitzers must be cut as shown in [Figure 15](#).

## (2) Hydrospring Recoil and Equilibrator Cylinder

(a) Drain the oil from the hydrospring recoil cylinders. On hydrospring cylinders, cut through the cylinder lengthwise, such that the cut is 4 inches or more in length and of sufficient depth to cut through at least two coils of the spring as shown in [Figure 16](#). Concentric-type recoil mechanisms must be cut through the cradle in the most accessible area, the cut to be of sufficient length and depth to cut at least two coils of the spring as shown in [Figure 17](#).

(b) Hydrospring recoil and equilibrator mechanisms contain springs under high pressure; therefore, extreme caution must be exercised. DEMIL must be performed by technically qualified personnel only. No attempt should be made to cut the cylinder in two pieces without prior release of spring tension.

(c) In the case of the 40mm automatic gun, the procedures are:

1. Remove the two drain plugs near the front of the recoil cylinder(s) and drain the recoil oil.

2. At a point just behind the recoil cylinder attaching bracket, cut completely through the tube of the casing body assembly, recoil cylinder(s), and barrel assembly(s) (if a barrel is installed on the gun).

3. Open the top cover(s) and cut longitudinally through the top portion of the breechring(s) and breechblock(s).

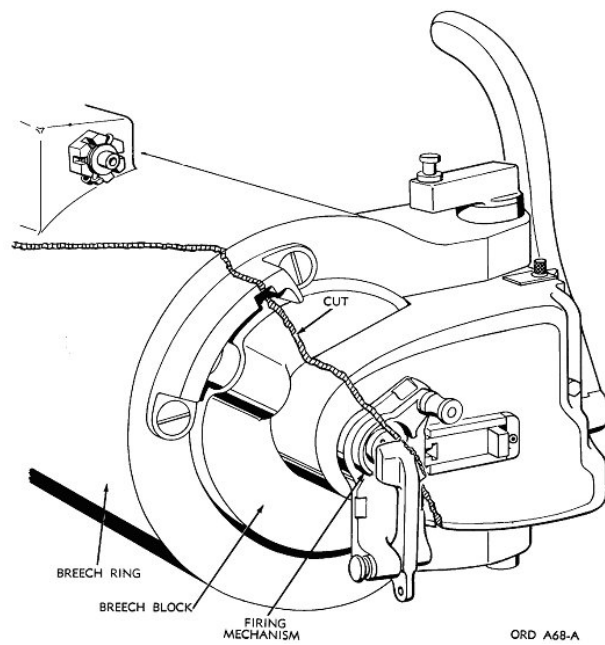
4. At a point between the front and rear loader guides, cut completely through the breech casing body(s) and tray(s).

(3) Spring-Type Equilibrators. Spring-type equilibrators such as the type used on the 105mm howitzers of the M2-series must be cut through both inner and outer spring as shown in [Figure 18](#).

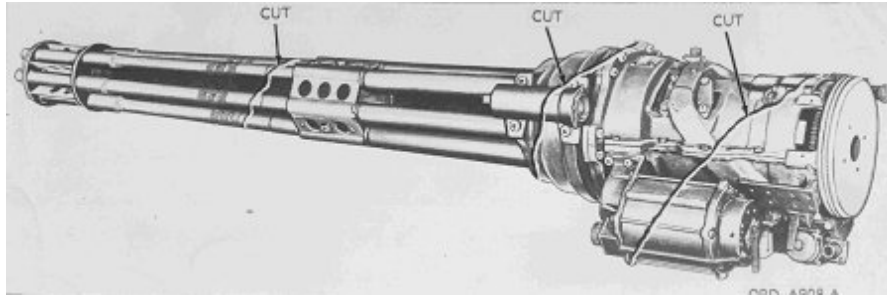
**Figure 5. Breech Ring and Sliding Breechblock**



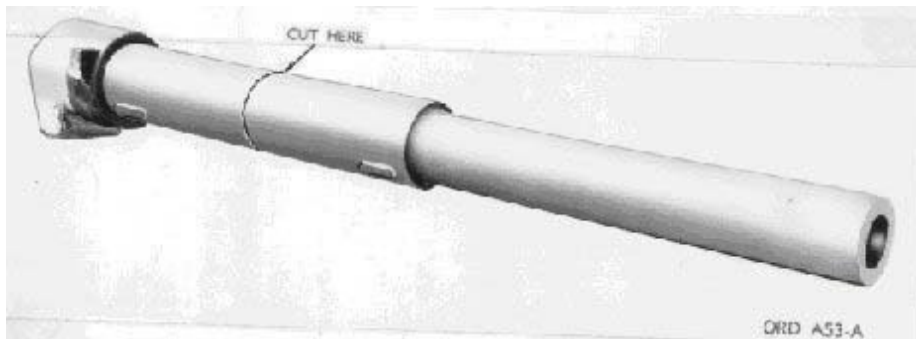
**Figure 6. Interrupted Thread Breechblock**



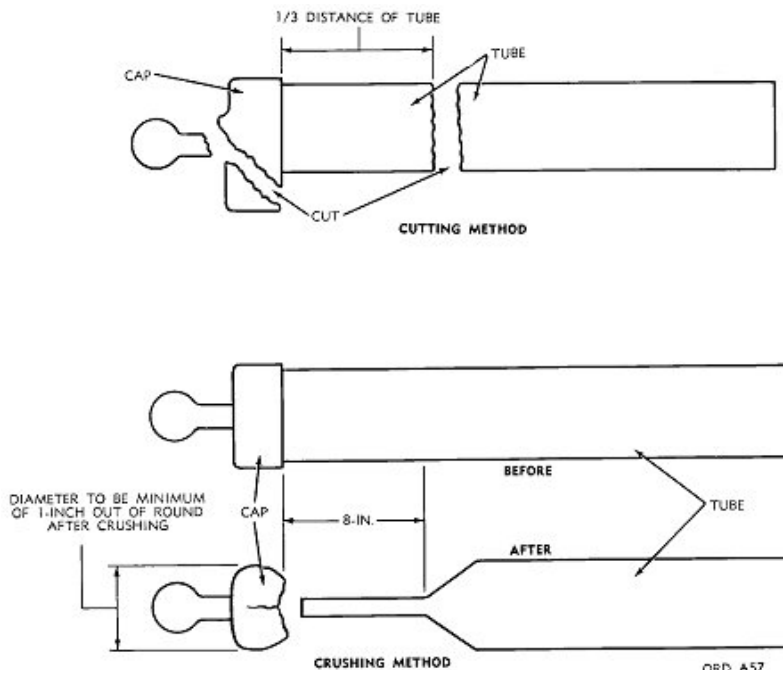
**Figure 7. 20mm Rotary Cannon**



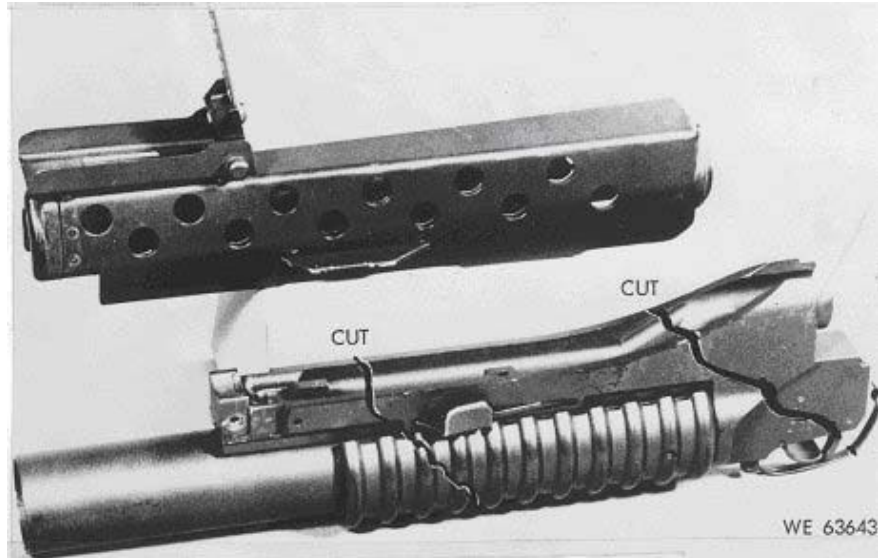
**Figure 8. Artillery Tube**



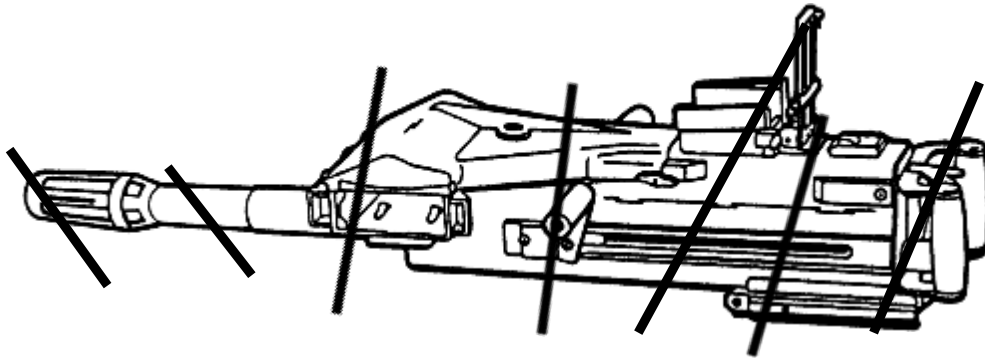
**Figure 9. Mortar Tube**



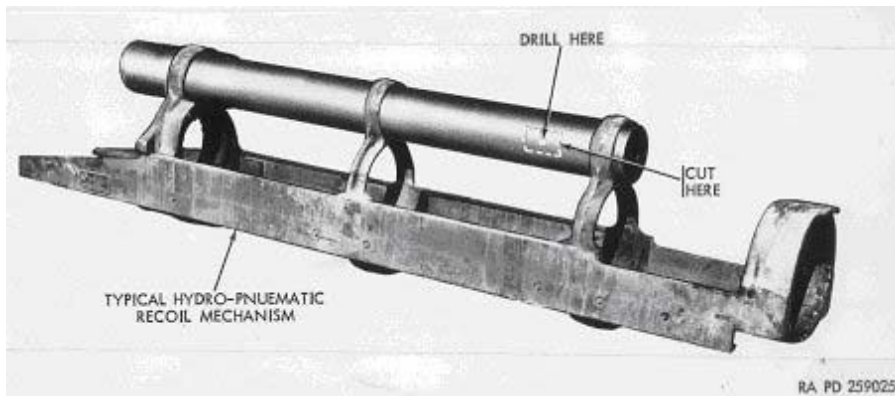
**Figure 10. 40mm Grenade Launcher**



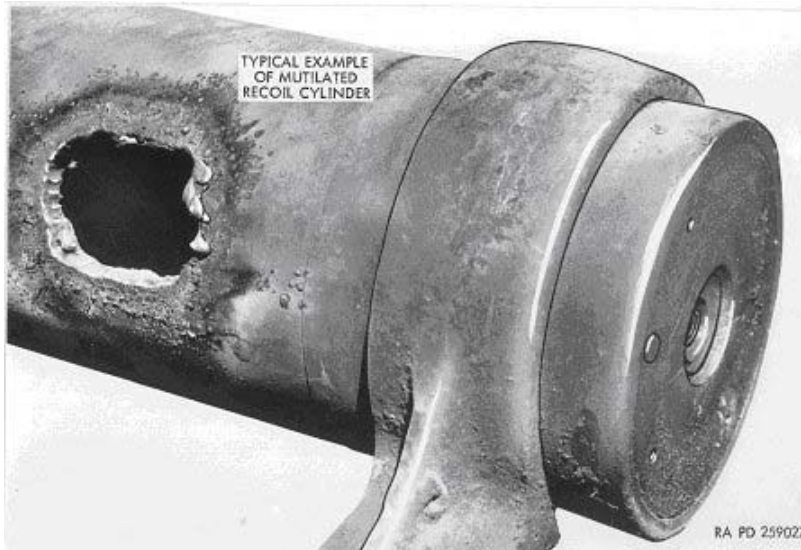
**Figure 11. 40mm Automatic Grenade Launcher**



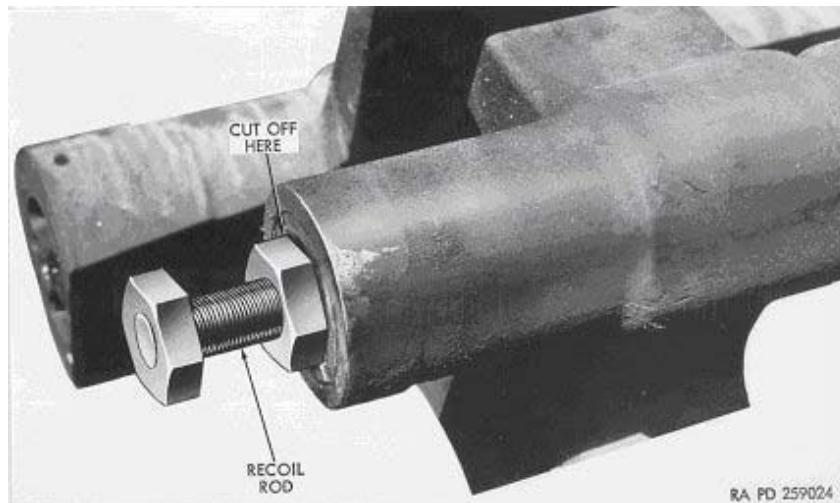
**Figure 12. Hydropneumatic Recoil Mechanism**



**Figure 13. Nitrogen Cylinder**

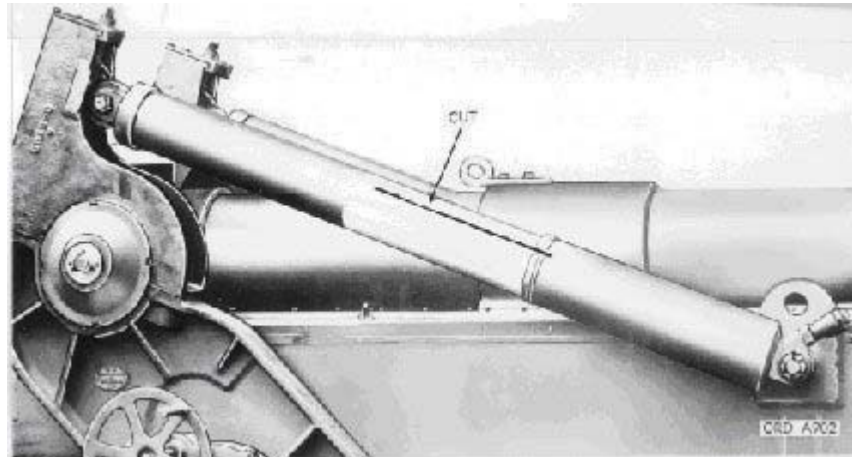


**Figure 14. Recoil Rod**

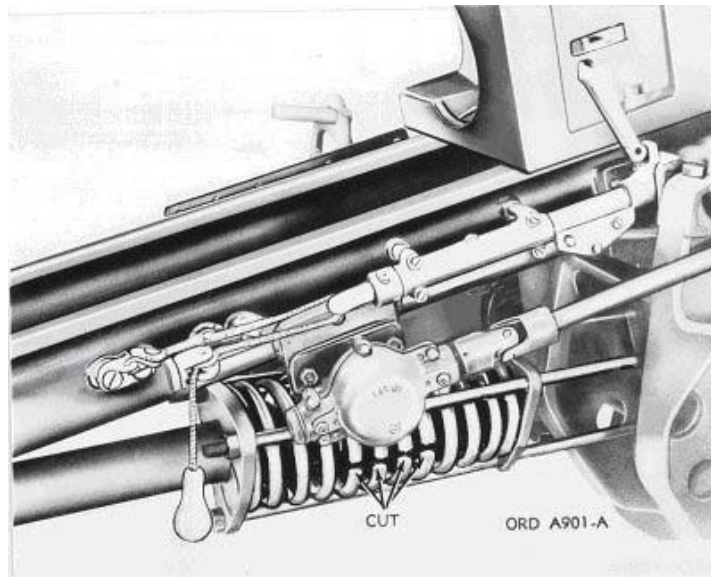




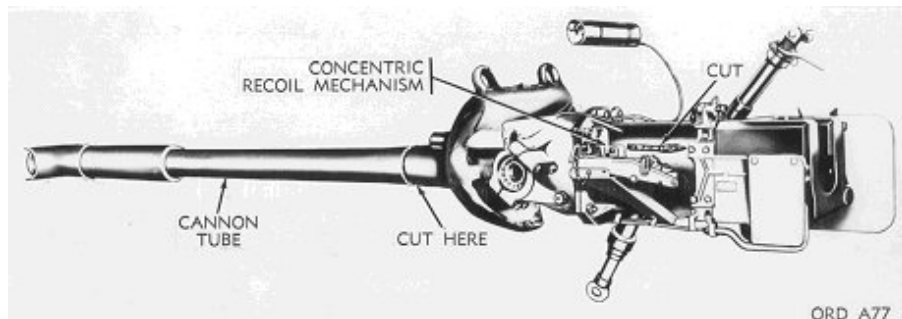
**Figure 15. Hydropneumatic Equilibrator**



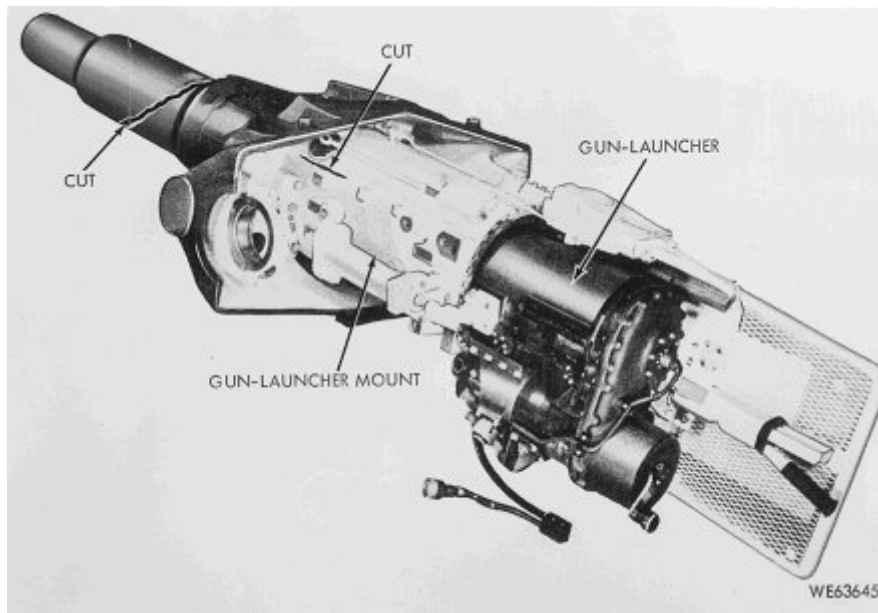
**Figure 16. Spring-Type Equilibrator**



**Figure 17. Concentric Recoil Mechanism- Type Cannon**



**Figure 18. Concentric Recoil Mechanism-Type Gun Launcher**



### 3A.5. AMMUNITION AND ORDNANCE

a. This section corresponds to DEMIL Coding Table 5.

b. DEMIL Code “D” Items. All DEMIL code “D” items must be destroyed by cutting, burning, breaking, crushing, etc., as appropriate to preclude restoration for further use as an item or for identification and association of related parts. It is preferable to DEMIL all items to the level of scrap.

(1) Inert Loaded Ammunition, Projectiles, and Similar Items of all Types Loaded with Inert Filler to Simulate a Service Item. Remove the fuse and/or spotting charge, where applicable, and burn or detonate. Remove the rotating band from artillery projectiles and open the closure of the projectile body to expose the inert filler. On items without rotating bands, open the body closure to expose the inert filler and damage the closure surface to prevent reloading or resealing. For inert loaded items (concrete, sand, plaster), a potential explosive safety hazard exists when the internal filler is not exposed or unconfined during burning, melting, or cutting. Heat generated from a DEMIL process can cause the filler, moisture, and air to expand and burst sealed casings. For this reason, disposal activities must not accept inert loaded items unless the internal filler is exposed and unconfined. The internal filler may be exposed by removal of the fuze well from the cavity, removal of base plates, or by puncturing or drilling holes in the bomb casing.

(2) Ammunition And Components That Have Been Fired or Expended, Range Residue, and Other Non-Explosive Items. All material must be documented as safe prior to accomplishment of DEMIL. Range residue must be processed in accordance with DoDM 4160.21 and DoDI 4140.62 after all required DEMIL is accomplished.

(3) Artillery and/or Mortar Ammunition Components and Similar Items of All Types. Remove the rotating band and deform fuze cavity threads or score or deform bourrelet or gas check band. Score practice round projectile with a torch, displacing a minimum of 1 cubic inch of metal or shear into two pieces. Deform fin assembly threads and fin blades.

(4) Other Non-Explosive Filled Items. Cut, crush, or process through a deactivation furnace. Burn or cut cartridge case lines and propelling charge bags. Cut, burn, or crush aircraft and ground signal cases. Crush or detonate piezoelectric elements.

c. DEMIL Code “G” Items. The SMCA is responsible for DEMIL and disposal for conventional ammunition in accordance with DoDD 5160.65 and DoDI 5160.68. Technical instructions must be furnished by the Military Services having overall knowledge and responsibility for disposal of the materiel.

### **3A.6. LAUNCH VEHICLES, GUIDED MISSILES, BALLISTIC MISSILES, ROCKETS, TORPEDOES, BOMBS, AND MINES**

a. This section corresponds to DEMIL Coding Table 6.

b. DEMIL Code “D” Items. All DEMIL code “D” items must be destroyed by cutting, burning, breaking, crushing, etc., as appropriate to preclude restoration for further use as an item or for identification and association of related parts. It is preferable to DEMIL all items to the level of scrap.

#### (1) Grenade Launchers

(a) The preferred method of destruction for extruded and cast aluminum construction items is crushing. Alternatively, cut as shown in [Figure 19](#).

(b) In the case of automatic grenade launchers, make four cuts as shown in [Figure 20](#):

1. Just behind the suppressor.
2. Where the barrel and receiver connect.
3. Middle of receiver.
4. Where the rear sight and receiver connect.

(2) Rocket Launchers ([Figure 21](#)). Rocket launchers, including rails, must be cut, crushed, or broken to render them inoperable and beyond restoration.

#### (3) Torpedo Tubes

(a) The breechring must be removed by cutting or sawing from the torpedo tube barrel. The point of cut in the barrel must be approximately 6 to 12 inches forward from the face of the breechring. Remove the rotating breechlocking ring and cut in half.



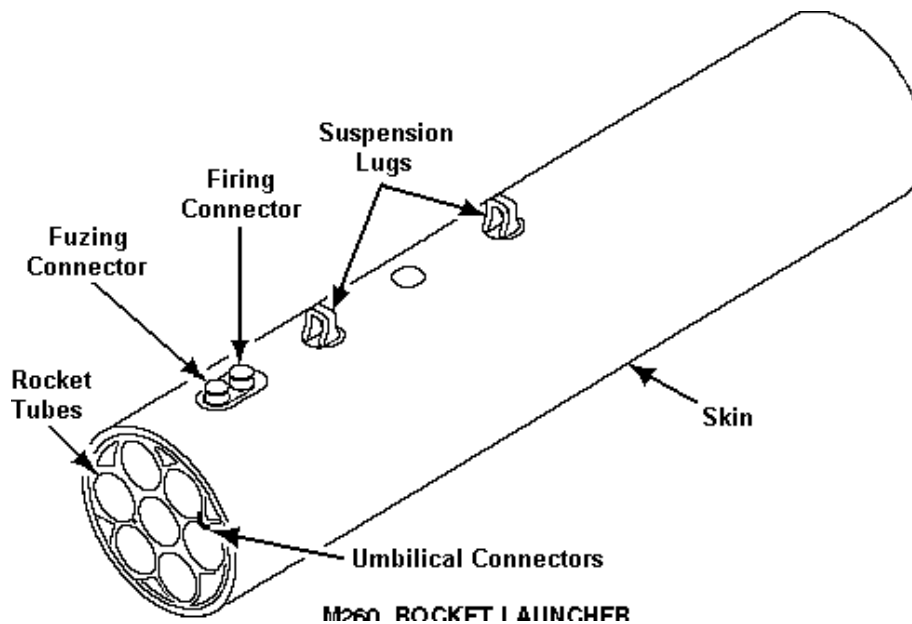
(b) All muzzle and breechdoors must be cut into two pieces of approximately equal sizes.

(4) Ramjet, Pulsejet, and Scramjet Engines. Some examples of key points include, but are not limited to, ignition system, fuel system (including the variable area nozzles and/or fuel spray systems), and engine mounting fittings.

(5) Rocket, Space Launched Vehicle (SLV) and Missile Engines. Some examples of key points include, but are not limited to, thrust chamber, turbine pump, balanced material orifices, gas generator (when used) and engine mounting fittings

c. DEMIL Code “G” Items. The SMCA is responsible for DEMIL and disposal for conventional ammunition in accordance with DoDD 5160.65 and DoDI 5160.68.

**Figure 19. Rocket Launcher**



### 3A.7. EXPLOSIVES AND ENERGETIC MATERIALS, PROPELLANTS, INCENDIARY AGENTS, AND THEIR CONSTITUENTS

a. This section corresponds to DEMIL Coding Table 7.

b. DEMIL Code “G” Items. The SMCA is responsible for DEMIL and disposal for conventional ammunition in accordance with DoDD 5160.65 and DoDI 5160.68. Technical instructions must be furnished by the Military Services having overall knowledge and responsibility for disposal of the material.

### 3A.8. SURFACE VESSELS OF WAR AND SPECIAL NAVAL EQUIPMENT

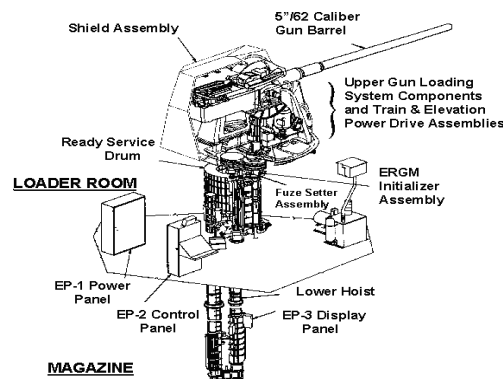
a. This section corresponds to DEMIL Coding Table 8.

b. DEMIL Code “D” Items. Navy gun mounts, Navy gun turrets, and other armored items, as shown in [Figure 22](#), must have the armor cut into at least four approximately equal sized pieces to destroy integrity and turret rings cut in two places. DEMIL code “D” items must be destroyed by cutting, burning, breaking, crushing, etc., as appropriate to preclude restoration for further use as an item or for identification and association of related parts. It is preferable to DEMIL all items to the level of scrap.

c. DEMIL Code “C” Key Point Items. Armament, hulls (warships only), applicable items designated in other categories in this guidance, and other items designated by the Naval Sea Systems Command or other procuring Military Service and/or Defense Agency.

d. DEMIL Code “F” Items. See Section 5.8 regarding the method to obtain special instructions.

**Figure 20. Naval Gun Mount**



### 3A.9. GROUND VEHICLES

a. This section corresponds to DEMIL Coding Table 9.

b. DEMIL Code “D” Items (Key Points). All DEMIL code “D” items must be destroyed by cutting, burning, breaking, crushing, etc., as appropriate to preclude restoration for further use as an item or for identification and association of related parts. It is preferable to DEMIL all items to the level of scrap.

(1) Armament. Armament must be demilitarized as prescribed for Categories I and II in sections 1 and 2 of this enclosure, respectively. DEMIL of the main armament (such as gun, howitzer, mortar, or rocket launcher) on combat vehicles may be accomplished on the vehicles or after removal from the vehicles.

(2) All Hinge-Mounted Items. All hinge-mounted items (such as doors, ramps, or hatches) must be removed from the vehicle prior to cutting the hull.

(3) Turrets and/or Cupolas. Turrets and/or cupolas must be cut into two sections as shown in [Figure 23](#) and removed prior to cutting the hull.

(4) Hulls and Chassis

(a) The top section of the hull on all vehicles must be cut into four sections without affecting the suspension, as shown in [Figures 23](#) through [25](#). To accomplish the hull cuts, a complete circumferential cut must be made at or just above the track or wheel level and cuts must be made across the top of the hull from the front center to the rear center (longitudinal) and from the left side center to the right side center (transverse).

(b) A rectangular section of the hull front armor plate, starting at the circumferential cut and extending to the floor line, must be removed. The width of the section must be determined by making the widest cut possible without affecting the suspension.

(c) The bottom section, including the chassis, must be cut into four sections.

(5) Turret Rings. Turret rings must be cut in half utilizing a cutting tip that displaces at least 1/2 inch of metal at a minimum.

(6) Hard Targets. Tanks, vehicles, aircraft, and other articles covered under various DEMIL Coding tables and utilized as hard targets will usually have sustained damage, however, that damage does not necessarily constitute complete DEMIL. To ensure DEMIL is complete, hard target items must be demilitarized in accordance with the applicable section of this guidance. These items require an MDAS certificate per paragraph 4.7. b. 3) of draft DoDM 4160.28 Volume 2.

(7) Grenade Projector Mounts. Grenade projector mounts, as used in the M551 armored reconnaissance airborne vehicle, must be demilitarized by cutting to destroy the firing solenoid ([Figure 26](#)).

(8) Military Type Armed and Armored Vehicles. Military type armed and armored vehicles (i.e., integrated as opposed to being attached) must be destroyed completely, paying attention to the key points (as described in paragraph 3.A.9. c, including turbochargers and superchargers, if installed. Armor must be cut into 14-16 inch pieces. Armament must be demilitarized as prescribed for Sections 3A.3 and 3A.4. DEMIL of the main armament on combat vehicles may be accomplished on the vehicles or after removal from the vehicles.

c. DEMIL Code "C" Key Point Items ([Figure 27](#)). Some example of key points for vehicles, self-propelled guns, howitzers, mortars, military railway trains, and combat engineer vehicles include, but are not limited to, up-armor kits, AE, weapons, weapon fittings and/or mounts and special reinforcements for those mountings, communications equipment, ballistic glass, wiring and/or cable harnesses and assemblies, engines specifically designed, modified, or configured for the item, transmissions, deep water fording equipment (if installed), pneumatic tire casings of a kind designed to be bullet-proof or to run when deflated, tire inflation pressure control systems

(Operated from inside a moving vehicle), areas of armored protection for vital parts, (e.g., fuel tanks or vehicle cabs), identification plates, radioactive components, and other electronics.

**Figure 21. Tank, Combat, Full Tracked**



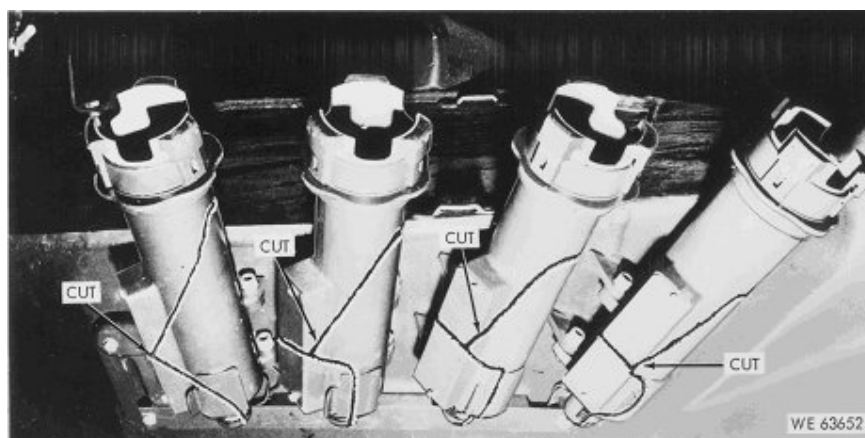
**Figure 22. Personnel Carrier**



**Figure 23. Tank Recovery Vehicle**



**Figure 24. Grenade Projector Mounts**



**Figure 25. Mine Resistant Ambush Protected Vehicle (MRAP)**



### 3A.10. AIRCRAFT AND RELATED ARTICLES

a. This section corresponds to DEMIL Coding Table 10.

b. DEMIL Code “D” Items. Armament ([Figure 28](#)) must be demilitarized as specified for Sections 3.0, 4.0, and 6.0. All DEMIL code “D” items must be destroyed by cutting, burning, breaking, crushing, etc., as appropriate to preclude restoration for further use as an item or for identification and association of related parts. It is preferable to DEMIL all items to the level of scrap.

c. DEMIL Code “C” Key Point Items.

(1) Military Aircraft

(a) Unfit for Flight. Aircraft ([Figure 29](#) and [Figure 30](#)) that are specifically designed for military purposes must be made unfit for flight as follows. This process does not DEMIL all of the air frame key points:

1. Cut or break completely through at least one lobe of the fuselage trifurcated horizontal and vertical stabilizer spar attachment fittings, on both the right and the left hand sides of the stabilizer carry-through spar assemblies.

2. Cut or break completely through at least one lobe of the stabilizer bifurcated spar attachment fittings, on both the right and the left hand sides of the horizontal and vertical stabilizer wing carry-through spar assemblies.

3. Mutilate the area where the wing attaches and becomes a part of the fuselage structure in a manner that completely severs the wing spar.

4. Mutilate the empennage (tail assembly) at the horizontal and vertical stabilizer attaching fittings area.

5. Cut or break the fuselage between the wing and empennage.

(b) Aircraft key points are required to be destroyed. The airframe and fuselage, to include the cockpit, may be destroyed by crushing, shredding or melting. The key points include but are not limited to aircraft fuselage, tail assembly, wing spar, armor, Radomes, armament and armament provisions, missile ablative shell, impact detectors and circuitry, and missile guidance systems.

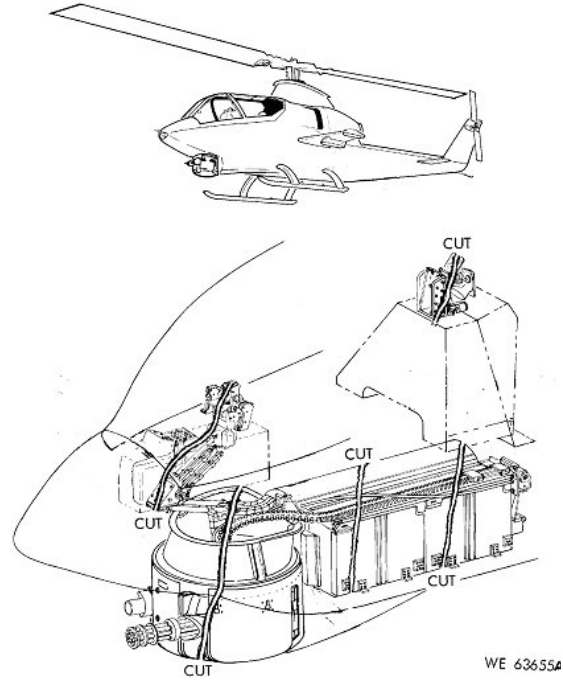
(c) Helicopters ([Figure 31](#)) specifically designed for military purposes must be demilitarized by crushing, shredding, or melting the entire airframe and fuselage, ensuring that the transmission mounts and supporting structural beams, engine deck in area of mounts, wing attaching mounts and support beam structure, and fuselage to tail boom attaching mounts and tail rotor gear box mounts have been destroyed. Notations in [Figure 32](#) identify key points for DEMIL that need to be removed or destroyed.

(2) Engines. See Section 3.A.6 for ramjet, pulsejet, scramjet, and rocket engines and 3.A.21 for gas turbine engines.

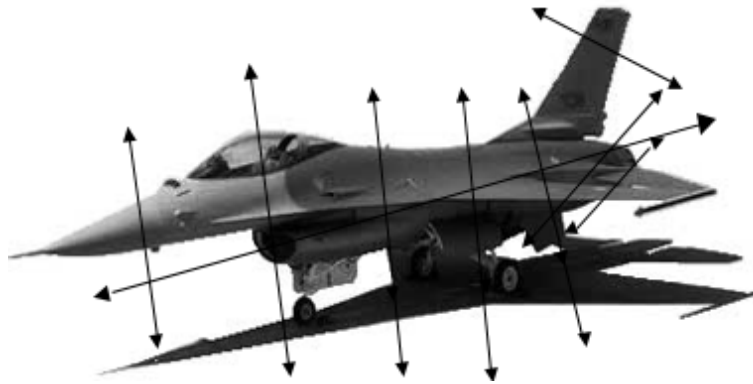
d. DEMIL Code “G” Items. Pylons and ejector/release racks must be demilitarized as shown in [Figure 32](#). Technical instructions must be furnished by the Military Services having overall knowledge and responsibility for disposal of the material.



**Figure 26. Helicopter Armament Subsystem**

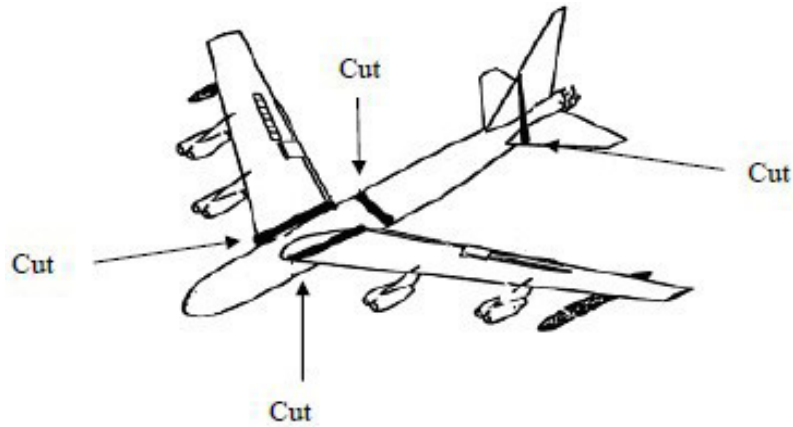


**Figure 27. Single Engine Aircraft**

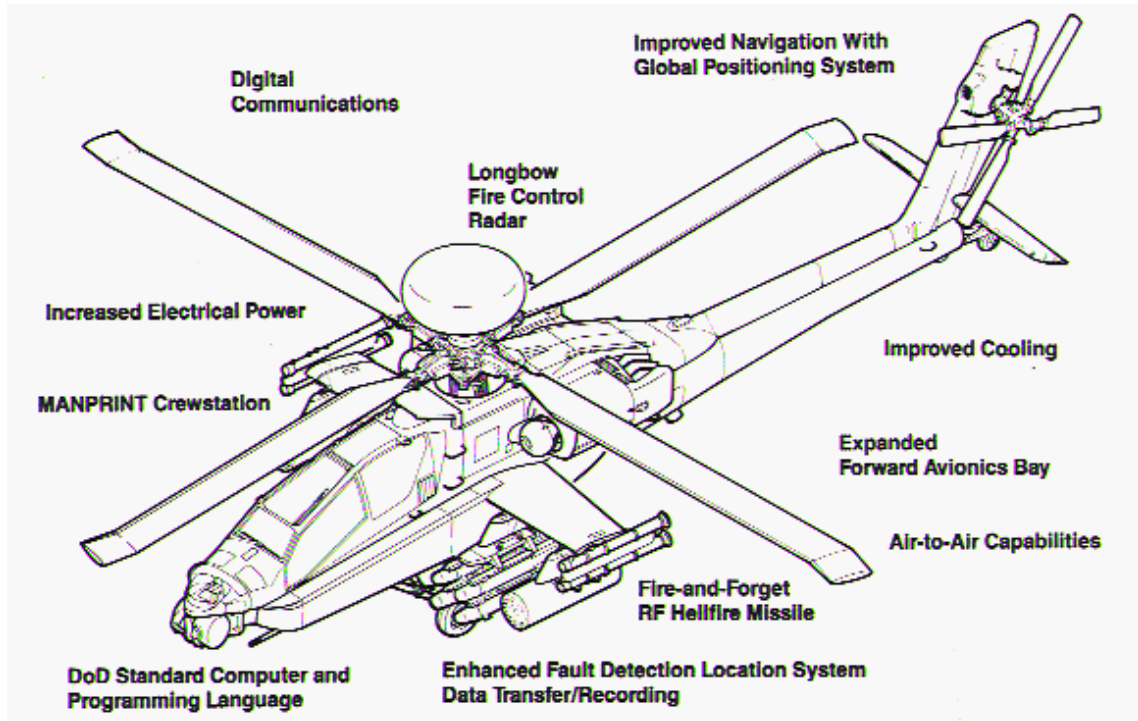




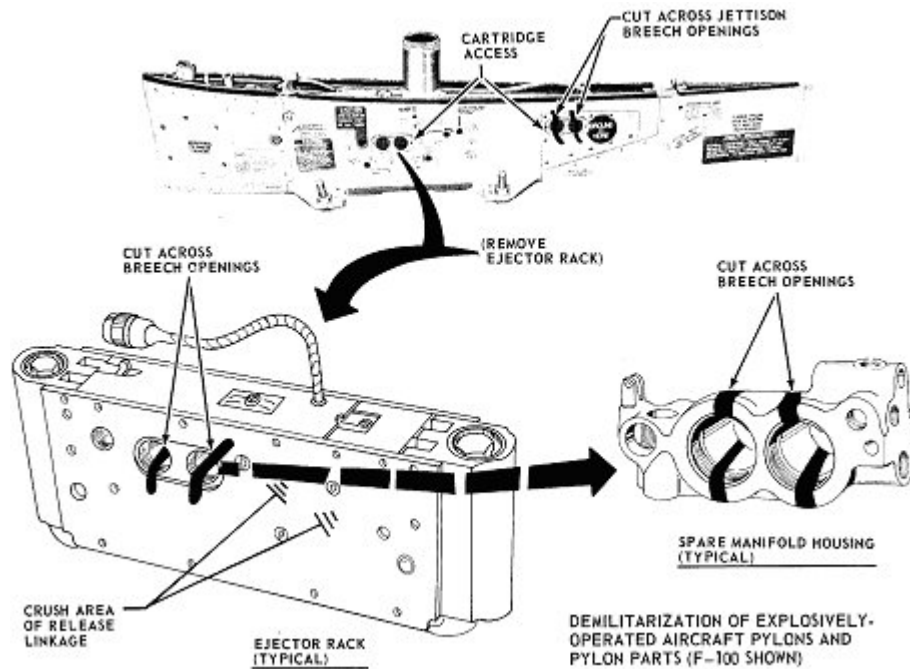
**Figure 28. Multi-Engine Aircraft**



**Figure 29. Attack Helicopter**



**Figure 30. Aircraft Pylons and Pylon Parts**



### 3A.11. MILITARY TRAINING EQUIPMENT

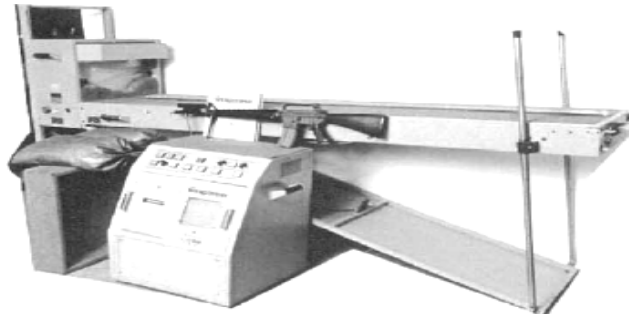
a. This section corresponds to DEMIL Coding Table 11.

b. DEMIL Code "C" Key Point Items. DEMIL-required property from other categories of this guidance that are contained in training equipment are key points of the training equipment and require DEMIL. In [Figure 33](#), the helmet and vision device and in [Figure 34](#), the M16A1/A2, the recoil assembly and cable, the display console, and the remote control box are all key point items that fall under other categories in this guidance.

**Figure 31. Aviation Combined Arms Tactical Trainer**



**Figure 32. Rifle Marksmanship Trainer Weaponeer**



### **3A.12. PERSONAL PROTECTIVE EQUIPMENT**

- a. This section corresponds to DEMIL Coding Table 12.
- b. No specific DEMIL requirements are provided here. The DEMIL requirements of the assigned DEMIL code and technical knowledge are used to determine the method of DEMIL.

### **3A.13. MILITARY ELECTRONICS**

- a. This section corresponds to DEMIL Coding Table 13.
- b. DEMIL Code “D” Items.
  - (1) All DEMIL code “D” items must be destroyed by cutting, burning, breaking, crushing, etc., as appropriate to preclude restoration for further use as an item or for

identification and association of related parts. It is preferable to DEMIL all items to the level of scrap.

(2) Items that incorporate a TEMPEST application and are specifically designed for military use, must be completely destroyed to preclude restoration as an item for its original function (this includes both entire end items and individual components, as applicable). If the TEMPEST application is to a commercially available item, the turn-in activity must sanitize the equipment of all classified and/or sensitive data and software prior to turn-in to the disposal activity. The turn-in document must be annotated that the item has TEMPEST application and has been sanitized prior to turn-in. These items must then be considered Commerce Control List Items (CCLI) and incorporate all appropriate controls.

### **3A.14. FIRE CONTROL, LASER, IMAGING, AND GUIDANCE EQUIPMENT**

a. This section corresponds to DEMIL Coding Table 14.

b. DEMIL Code “D” Items. Ensure that all lens or other optical components are completely destroyed. All DEMIL code “D” items must be destroyed by cutting, burning, breaking, crushing, etc., as appropriate to preclude restoration for further use as an item or for identification and association of related parts. It is preferable to DEMIL all items to the level of scrap.

c. DEMIL Code “C” Key Point Items. Cutting, crushing, breaking, or melting IR night sighting and viewing equipment to the degree required to preclude repair or restoration to original intended use. Personnel engaged in DEMIL of this materiel should be aware of possible presence of self-luminous radioactive sights and coatings on certain optics. DEMIL must be performed only in accordance with procedures approved by local safety personnel.

### **3A.15. MATERIALS AND MISCELLANEOUS ARTICLES**

a. This section corresponds to DEMIL Coding Table 15.

b. DEMIL Code “D” Items. All DEMIL code “D” items must be destroyed by cutting, burning, breaking, crushing, etc., as appropriate to preclude restoration for further use as an item or for identification and association of related parts. It is preferable to DEMIL all items to the level of scrap.

(1) Armor Modules (Ceramic and/or Composite) and Armored Brackets

- (a) Break the armor module external fabric and internal material into smaller pieces.
- (b) After completing this preliminary crushing, separate the armor module metal components and dispose of the metal components as scrap.
- (c) Process remaining armor module into unrecognizable rubble and/or particles.

(2) Multi-layer camouflage systems. Specialized camouflage netting as shown in [Figure 35](#) must be demilitarized by cutting into pieces no bigger than 4 x 4 inches, shredding, burning, or by burying in a government-approved landfill.

**Figure 33. Specialized Camouflage Netting**



### **3A.16. TOXICOLOGICAL AGENTS, INCLUDING CHEMICAL AGENTS, BIOLOGICAL AGENTS, AND ASSOCIATED EQUIPMENT**

a. This section corresponds to DEMIL Coding Table 16.

b. DEMIL Code “G” Items. Destruction of chemical weapons is accomplished by and materials is accomplished by the Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA). (See <https://www.peoacwa.army.mil/> for additional information related to the chemical weapons). Destruction of Recovered Chemical Warfare Materiel (RCWM) is the responsibility of the Secretary of the Army as the Executive Agent in accordance with DoDD 5101.17E and is accomplished by the U.S. Army Chemical Materials Activity (CMA). (See <https://www.cma.army.mil> for additional information related to the RCWM). Disposal of Chemical, Biological, Radiological, and Nuclear-defense equipment (CBRN-D) throughout the DoD is accomplished by the Defense, Accountability, Reutilization and Disposal activity (DARD).

### **3A.17. SPACECRAFT AND RELATED ARTICLES**

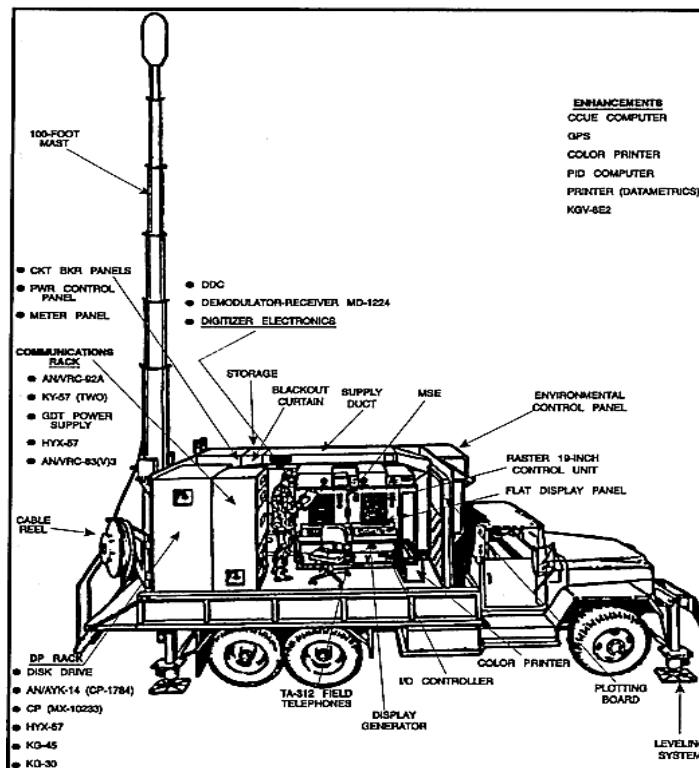
a. This section corresponds to DEMIL Coding Table 17.

b. No specific DEMIL requirements are provided here. The DEMIL requirements of the assigned DEMIL code and technical knowledge are used to determine the method of DEMIL.

**Figure 34. Satellite Signals Navigation Set**



**Figure 35. Interim Ground Station Module**



**A.18. NUCLEAR WEAPONS RELATED ARTICLES**

a. This section corresponds to DEMIL Coding Table 18.

b. No specific DEMIL requirements are provided here. The DEMIL requirements of the assigned DEMIL code and technical knowledge are used to determine the method of DEMIL.

### **3A.19. CLASSIFIED ARTICLES, TECHNICAL DATA, AND DEFENSE SERVICES NOT OTHERWISE LISTED**

a. This section corresponds to DEMIL Coding Table 19.

b. DEMIL Code “P” Items. The applicable security classification guide must be used to determine the method of DEMIL.

### **3A.20. DIRECTED ENERGY WEAPONS**

a. This section corresponds to DEMIL Coding Table 20.

b. No specific DEMIL requirements are provided here. The DEMIL requirements of the assigned DEMIL code and technical knowledge are used to determine the method of DEMIL.

### **3A.21. GAS TURBINE ENGINES AND ASSOCIATED EQUIPMENT**

a. This section corresponds to DEMIL Coding Table 21.

**Table 1. Gas Turbine Engine DEMIL Guidance**

<b>Part 1: Category XIX. Gas Turbine Engines and Associated Equipment Part 2: ECCN 9A619, ECCN 9B619</b>
<p>Engines</p> <p>(a) Turbojet, Turboprop, and Turbofan Engines. Remove the turbine wheel and shaft assembly from the engine and cut a segment of turbine wheel bucket spines containing two or more “fir trees.” Sever the shaft at the wheel end bearing point. For multistage turbines, only the shaft and last stage turbine wheel need to be demilitarized. In cases where it is not economically practicable or feasible to remove the turbine wheel and shaft assembly from the engine, gain access to them by removing or cutting a hole in the shroud.</p> <p>(b) Ramjet, Pulsejet, and Scramjet Engines. Some examples of key points include, but are not limited to, ignition system, fuel system (including the variable area nozzles and/or fuel spray systems), and engine mounting fittings.</p> <p>(c) Rocket Engines. Some examples of key points include, but are not limited to: thrust chamber, turbine pump, balanced material orifices, gas generator (when used) and engine mounting fittings.</p>

**3A.22. SUBMERSIBLE VESSELS AND RELATED ARTICLES**

- a. This section corresponds to DEMIL Coding Table 22.

**3A.23. ARTICLES, TECHNICAL DATA, AND DEFENSE SERVICES NOT OTHERWISE LISTED**

- a. This section corresponds to DEMIL Coding Table 23.
- b. No specific DEMIL requirements are provided here. The DEMIL requirements of the assigned DEMIL code and technical knowledge are used to determine the method of DEMIL.