***GTA 05-02-036**

Destroy Photolithographic Equipment to Prevent Enemy Use

Purpose: This graphic training aid (GTA) is only a guide for destroying photolithographic equipment to prevent enemy use. For more information, refer to Field Manual (FM) 5-250, local standing operating procedures, and local retrograde plans. The proponent for this publication is the United States Army Training and Doctrine Command (TRADOC). Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commandant, United States Army Engineer School, ATTN: ATSE-DT, Individual Training Division, 320 MANSCEN Loop, Fort Leonard Wood, Missouri 65473-8929.

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1. When the capture or abandonment of photolithographic equipment to an enemy is imminent, the unit commander must decide to either destroy the equipment or render it inoperative. Based on this decision, orders are issued to cover the desired extent of destruction. Whatever method of demolition is employed, it is essential to destroy the same vital parts of all photolithographic equipment and all corresponding repair parts.

a. If destruction to prevent enemy use is ordered, the equipment must be so badly damaged that it cannot be restored to a usable condition in the combat zone either by repair or by cannibalization. Adequate destruction requires that all parts essential to the operation of the equipment, including essential repair parts, be destroyed or damaged beyond repair.

b. However, when lack of time and personnel prevents destruction of all parts, priority is given to the destruction of those parts most difficult to replace. Equally important, the same essential parts must be destroyed on all like equipment so that the enemy cannot construct one complete unit from several damaged ones.

2. Explosives and mechanical methods, either alone or in combination, are the most effective methods to destroy photolithographic equipment. Other methods include weapons fire, scattering and concealment, burning, and submersion.

a. Explosives. Place as many charges as the situation permits or are necessary, and detonate them simultaneously with a detonating cord and a suitable detonator. Refer to Figures 1–3 for placement of explosive charges.

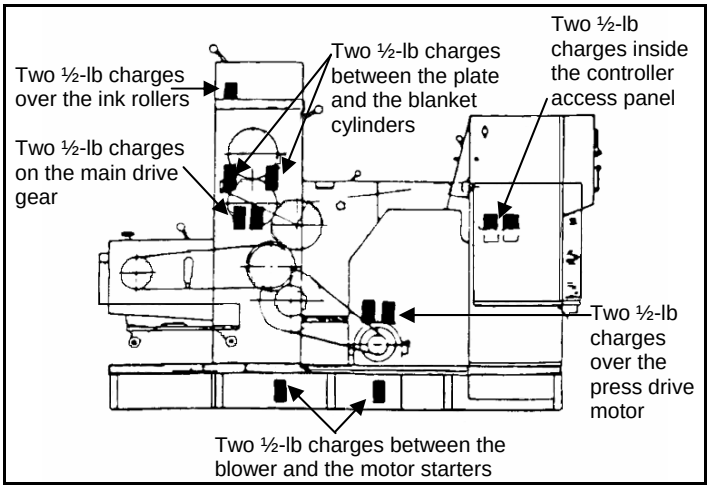

Figure 1. Offset Press (Single-Color)

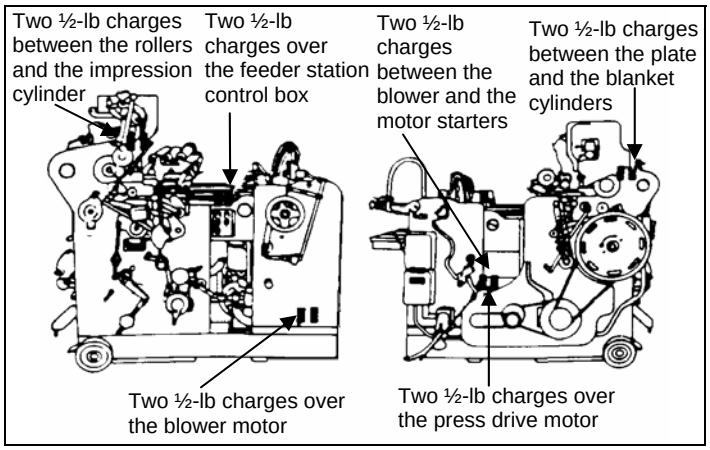

Figure 2. Offset Press (Dual-Color)

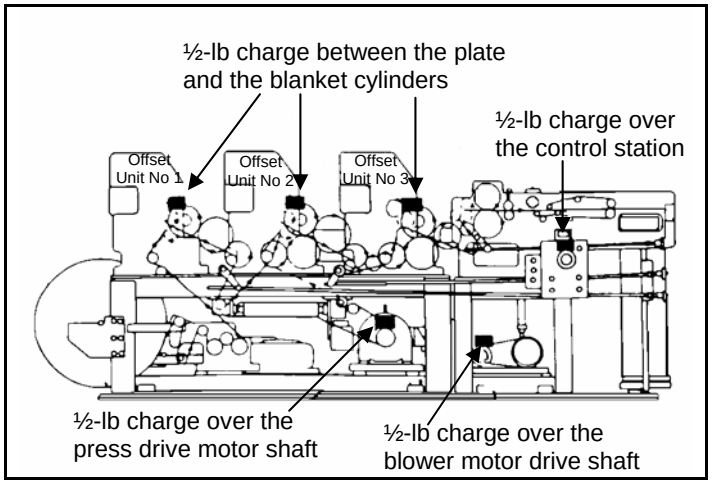

Figure 3. Offset Press (Three-Color)

b. Mechanical. Use sledgehammers, crowbars, picks, axes, or any other heavy tools available, together with the tools normally included with photolithographic equipment, to destroy the equipment.

c. Weapons Fire. Fire on all photolithographic equipment with the heaviest weapons available and appropriate.

d. Scattering and Concealment. Remove all easily accessible, vital parts. Scatter them through dense foliage; bury them in dirt or sand; or throw them in a lake, stream, well, or other bodies of water.

e. Burning. Pack rags, clothing, or canvas under and around the unit. Saturate with gasoline, oil, or diesel fuel and ignite.

f. Submersion. Totally submerge the unit in a body of water to provide water damage and concealment. Saltwater will do the greatest damage to metal parts.

3. The vital parts that must be destroyed are listed below. These parts, components, and assemblies are listed in the order, by each type of equipment, in which demolition should be accomplished. Demolish the additional parts, components, and assemblies to further destroy the unit.

- Offset presses: cylinder assembly, drive motor and gears, electrical circuits, and ink roller.
- Film processors: rack assemblies, electrical system, chemical tanks, and replenisher pumps.
- Flip-top plate makers: power supply, exposure lamp assembly, vacuum pumps, vacuum frame glass, and mat.
- Vacuum frames: vacuum pumps, light source, vacuum frame glass, and mat.
- Layout tables: diffusing glass, glass assembly, and electrical assembly.

- Collators: drum assembly, electrical system, and switches.

- Paper cutters: hydraulic system, knife (blade), drive motor, electrical system, and flywheel.

- Paper stitchers: head assembly, electrical system, swivel, and wire cutter.

- Paper drills: motor, drill bits, and worktable.

- Paper folders: fold plates, drive rollers, conveyor tapes, and motor.

- Shredders: cutting cylinders, motor, and control panel.

- Tractors and trucks: tires, alternator, fuel pump, cylinder block and heads, transmission and power transfer case, and fuel tank.

- Trailers: tires, air lines, air reservoir and chamber, and kingpin and brake assembly.

NOTE: Van equipment can be made inoperative or destroyed in conjunction with trailers.

- Generators: carburetor, governor, fuel pump, flywheel, control panel, and intake and exhaust manifold.