TECHNICAL MANUAL

PROCEDURES FOR THE DESTRUCTION OF AIRCRAFT AND ASSOCIATED EQUIPMENT TO PREVENT ENEMY USE

HEADQUARTERS, DEPARTMENT OF THE ARMY 12 NOVEMBER 1971

WARNING PAGE

Personnel performing instructions involving operations, procedures, and practices which are included or implied in this technical manual shall observe the following instructions. Disregard of these warnings can cause serious or fatal injury to personnel.

FIRE (PARA 2-4). Exercise extreme care when using petroleum products to destroy equipment by fire. These materials are highly flammable.

DEMOLITION (explosives) (para 2-6). Destruction of equipment using explosives shall be performed in an area free of personnel to prevent injury which may be caused by flying fragments.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1.1. Scope.

This manual prescribes equipment priorities, methods, and techniques which are to be used in the destruction of aircraft and associated equipment to prevent enemy use when capture or abandonment of the equipment is imminent.

1-2. Purpose.

The purpose of this publication is to provide personnel with guidance which will permit a quick, effective, and safe means of rendering inoperative or destroying subject equipment which is in imminent danger of capture by an enemy.

1.3. Reporting of Errors.

Reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on I)A Form 2028 (Recommended Changes to Publications) and forwarded directly to Commanding General, US Army Aviation Systems Command, ATTN: AMSAV-M, PO Box 209, St. Louis, Missouri 63166.

Section II. PRELIMINARY CONSIDERATIONS

1-4. General.

Destruction of aircraft and associated equipment which is in imminent danger of capture by an enemy is a command decision that must be made by the battalion or higher commander. Upon receipt of orders from the proper authority, or in accordance with common, standard, operating procedures; equipment destruction may be initiated and should be as thorough as time, personnel, and means permit.

1-5. Planning.

All units possessing subject equipment should have a procedural plan for the implementation of destruction, to insure that the maximum and most effective damage is done to subject equipment, and to deny the use of this equipment to the enemy. The plan should outline the extent of demolition to be performed, priorities of destruction as applicable to the assigned equipment, and if applicable, the amount of explosives required. Additionally, the plan must be flexible enough in the designation of time, equipment, and personnel to contend with any tactical withdrawal situation. To prevent equipment cannibalization by an enemy, unit personnel shall be familiar with the priority sequence in which essential aircraft equipment, including repair parts in stock, are to be destroyed. The unit personnel shall also be familiar with the sequence to be followed for total destruction of subject equipment.

Section III. PRIORITIES FOR DESTRUCTION

1.6. General.

a. Priority must always be given to the destruction of classified equipment and associated documents.

b. When lack of time and/or stores prevent complete destruction of equipment, priority is to be given to the destruction of essential parts, and the same parts are to be destroyed on all like items.

c. A guide to priorities for destruction of repair parts for aircraft and associated equipment is contained in table 1-1.

1-7. Repair Ports.

The same priority for destruction of repair parts of a major item necessary to render that item inoperable must be given to the destruction of similar repair parts located in storage areas.

Table 1-1. Priorities /or Destruction of Aircraft and Associated Equipment

Equipment	Priority	Sub-priority	Parts
Aircraft and associated equipment	1		Identification (IFF) equipment, other classified electronic equipment, publications and documents pertaining thereto, and other materiel as defined by the national government concerned.
	2		Installed armament (use subpriorities for guns and/or small arms, as appropriate).
Guns		1	Breech, breech mechanism, and spares.
		2	Recoil mechanism
		3	Tube
Small arms		1	Breech mechanism
		2	Barrel
		3	Sighting equipment, including infrared
		4	Mounts
Aircraft and associated equipment		3	Engine assembly (priorities for destruction of magnetos, carburetors, compressors, fuel controls, turbines, and other engine subassemblies to be determined by national governments, depending on type of aircraft involved and time available for destruction).
	4		Airframe, control surfaces, and undercarriage (priorities for destruction of propellers, hubs, rotor blades, gear boxes, drive shafts, transmissions, and other subassemblies to be determined by national governments, depending on type of aircraft involved and time available for destruction).
	5		Instruments, radios, and electronic equipment (use subpriorities for radio, and/or radar and other electronic equipment).
Radio		1	Transmitters, oscillators and frequency generators
		2	Receiver
		3	Remote control units or switchboards, and. operating terminals
		4	Power supply and/or generator set
		5	Antennae
		6	Tuning heads
Radar and other electronic equipment	1		Frequency determining components, records, operating instructions, which are subject to security regulations, and identification material.
		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, and plotting boards

Table 1-1. Priorities /or Destruction of Aircraft and Associated Equipment

Equipment	Priority	Sub-priority	Parts
Radar and other	x	6	Cable systems
electronic	x	7	Automatic devices
equipment (cont)	x	8	Other control panels and generators
Aircraft and associated equipment	6	x	Electrical, fuel, and hydraulic systems

Section IV. DEGREE OF DAMAGE

1-8. General.

Methods of destruction should achieve such damage to equipment and essential spare parts that it will not be possible to restore the equipment to a usable condition in the combat zone either by repair or cannibalization.

1-9. Classified Equipment.

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

1-10. Associated Classified Documents.

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

CHAPTER 2

METHODS OF DESTRUCTION

Section I. DESCRIPTION AND ORDER OF DESTRUCTION METHODS

2.1. Self-destruction Devices.

a. The self-destruction device is a superior method for the destruction of classified equipment.

b. Built-in self-destruction devices should be set off even if the aircraft containing equipment with self-destruction devices is to be destroyed. These devices should be permitted to do their work at least partially before incendiaries or explosives (especially the latter) are set off. An explosion might blow parts or classified documents to safety where the enemy might find them.

2-2. Destruction by Improper Operation.

WARNING

This method of destruction can be extremely dangerous. In the case of propeller driven aircraft, engine seizure can cause crankshaft/propeller shaft failure. Personnel should evacuate the aircraft and stay clear of propeller and turbine wheel areas.

The aircraft and/or auxiliary power unit engines can be destroyed by draining all oil from the internal working parts and operating the engine until seizure occurs. Refer to paragraphs 2-11 and 2-12 below.

2-3. General Procedures Pertaining to Either Fire, Demolition, or Mechanical Destruction Methods.

a. Remove and discharge all portable fire extinguishers.

b. Discharge permanently installed fire extinguishers.

c. Activate all self-destruction devices.

d. Remove all publications and destroy by fire. Publications are difficult to destroy so that no intelligible information remains on any page. Burn such matter in small lots. Ensure that it is completely consumed.

2-4. Fire.

WARNING

Exercise extreme care when using petroleum products to destroy equipment by fire. These materials are highly flammable.

a. General. The destruction of equipment by use of fire is an effective method of destroying low-melting-point metal items, and equipment made from flammable materials. Mechanical destruction should be completed before initiating destruction by fire. When metallic items are to be destroyed, flammable materials should be packed under and around them, soaked with a flammable petroleum product, and ignited. Proper concentration of flammable materials will provide a hotter and more destructive fire.

b. Procedures. Prior to fire ignition and with time permitting, the following procedures may be accomplished:

(1) Remove and invert battery.

(2) Remove engine cowling and smash magneto, spark plugs, and front and rear engine sections. On gas turbine engines, smash fuel control and fuel manifold.

(3) Within the aircraft, smash instruments and avionic equipment, and also cut control cables, wire bundles, and hydraulic lines.

(4) Outside the aircraft, break off antenna masts and pitot tubes, and also open oil and fuel drain cocks, break oil lines, and puncture fuel cells.

(5) Accomplish all applicable instructions in paragraphs 2-2 and 2-3 above.

(6) Saturate the aircraft interior with a combustible fuel.

(7) Ignite the fire using one of the methods listed in c below.

c. Fire Ignition .Methods.

(1) From a safe distance, discharge either a signal cartridge, flare, or an incendiary grenade into the fuel vapor field.

(2) Prepare an extremely narrow fuel trail to a safe distance from the fuel vapor field and ignite the fuel trail with the aid of an ignited rag or paper attached to the end of a 6-foot minimum length pole.

(3) Locate an aircraft battery a safe distance away from the fuel vapor field and create a spark within the fuel vapor field by positioning the bare ends of two insulated wires .020 inch apart, within the fuel vapor field, and touching the opposite bare ends of the insulated wires to the battery posts.

2-5. Gunfire.

For information on the use of gunfire to destroy equipment refer to paragraph 2-12 below.

2-6 Demolition (Explosives).

WARNING

Destruction of aircraft using explosives shall be performed in an area free of personnel to prevent injury which may be caused by flying fragments.

Demolition assistance from trained demolition technicians should be requested from engineering units in the immediate area. If demolition assistance is not available, information on the use of explosives to destroy equipment can be found in FM 5-25, Explosives and Demolitions.

2-7. Mechanical.

Any mechanical means may be used, such as hammers. axes. crowbars, or cranes. For mechanical destruction, refer to paragraph 2-4b above, and accomplish steps (1) through (5).

2-8. Use of Natural Surroundings.

Natural surroundings can be used effectively for disposal by submerging equipment and repair parts under water such as lakes, ponds, bogs, and swamps. Equipment can also be concealed by hiding in caves or by burial, the latter being preferable. Where the surrounding area does not lend itself to such disposal, the wide dispersal of material preferably into heavy underbrush, can serve as a denial or delaying measure.

Section II. SPECIAL INSTRUCTIONS FOR AIRCRAFT AND ASSOCIATED EQUIPMENT

2.9. General.

Army aircraft of all types and the equipment installed therein are so similar that particular instructions for individual aircraft and individual equipment is not necessary. It is true, however, that the placement of a demolition charge can be the difference between minor damage or complete destruction. Refer to paragraph 2-6 above.

2.10. Self-destruction Devices.

The actuation devices for self-destruction systems are always displayed in a prominent location, usually a button marked in red, and protected by a shield to eliminate the possibility of accidental actuation. Refer to paragraph 2-1 above.

2-11. Improper Operation.

Improper operation is a temporary disabling method in the respect that the engines can be replaced. In some rare instances, the engines may operate successfully again after cooling takes place. For complete destruction,

follow this method with the fire destruction method. If fire destruction is not desired, refer to paragraph 2-12 below.

2.12. Gunfire.

The firing of a grenade launcher or small arms rounds Into the front or rear case of the engine is standard practice for complete engine destruction.

2-13. Spare Parts and Bench Stock.

All spare parts and bench stock should be destroyed using any or all of the methods listed above. Destroy similar parts or like items to prevent interchange.

This publication has been printed for the use of all concerned.

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