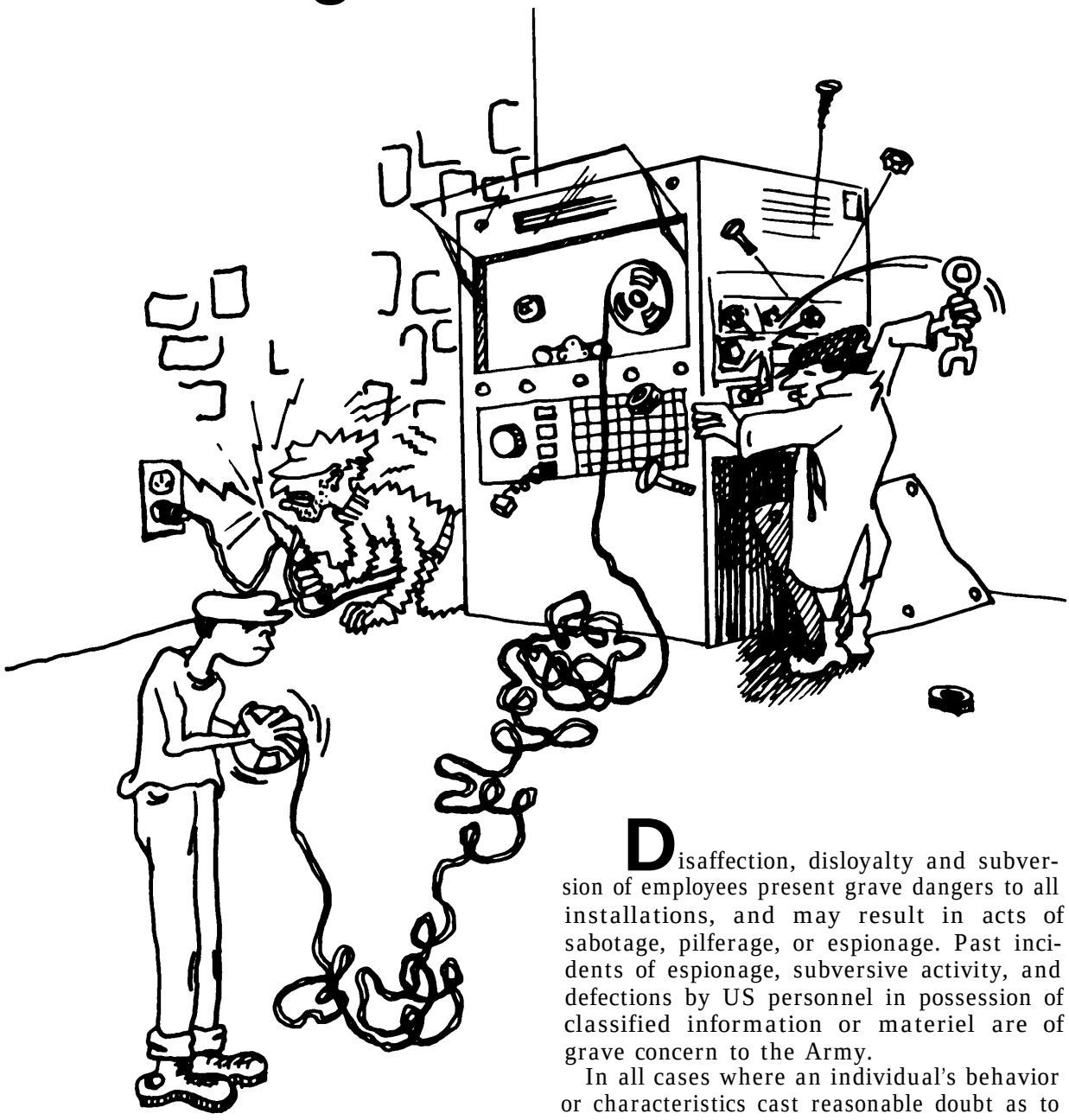
Appendix B

Sabotage



Disaffection, disloyalty and subversion of employees present grave dangers to all installations, and may result in acts of sabotage, pilferage, or espionage. Past incidents of espionage, subversive activity, and defections by US personnel in possession of classified information or materiel are of grave concern to the Army.

In all cases where an individual's behavior or characteristics cast reasonable doubt as to

his reliability or suitability, aggressive command action must be promptly taken to suspend his security clearance and thereby immediately withdraw access to classified information, materiel, or activities. Commanders and supervisors must administer this program so as to assure continued alertness for any indication of disqualifying conduct.

The primary purpose of this appendix is to expedite identification of persons with beliefs or traits of character dangerous to national security and their denial of appointment to, or removal from, positions of trust in which they could do significant harm to national interests.

B-1 The Sabotage Threat

Sabotage is defined in Federal law as any act that may injure, interfere with or obstruct the United States or any associate nation in preparing for or in carrying on war, or any act in willfully making, in a defective manner, war materiel or any tool used in making war materiel. It is the willful and malicious disruption of the normal processes and functions of the nation with respect to the national defense (chapter 645, Public Law 772, Aug 1948, 18 US Code 2153-2156).

a. Since Title 18 is a punitive law, the scope of sabotage which it defines is somewhat limited. Security personnel have a broader interest in this area, and should **expand this definition to include any act which maliciously destroys property or disrupts the operation or mission of an installation or facility for any reason whatever.** This includes vandalism, as defined in various dictionaries. Whether such vandalism could be chargeable as sabotage under the cited law is a matter for legal decision, and must be referred to the staff judge advocate.

b. The highly effective results which may be accomplished by the skillful employment of sabotage, and the known existence of certain groups available and willing to undertake such work, place this hazard high on the list of risks confronting the Army. In terms of trained manpower, equipment, and risk, a sabotage operation involves only negligible expenditure by the enemy; but the profit may be enormous if the target has been strategically selected.

c. The greatest danger of sabotage lies in concerted, simultaneous covert sabotage attempts against sensitive military installations or facilities, which, if successful, could seriously jeopardize military operations and could prevent tactical commanders from performing combat missions. **It is this threat of sabotage that requires sabotage alert procedures to be an important part of physical security plans.**

d. Sabotage as a diversion measure:

(1) Sabotage, particularly in the form of fire or minor explosions, may also be used as a diversion to permit pilferage, by drawing attention to the affected area and away from the object of the pilferage.

(2) This hazard exists particularly when security personnel are also responsible for firefighting and similar control operations.

B-2 Recognizing Sabotage

Recognition of an act of sabotage as such is often difficult, as the ultimate target may not be readily apparent and the act itself frequently destroys evidence of sabotage. To employ effective countermeasures against the threat of sabotage, it is necessary to understand some of the methods and targets of the saboteur.

B-3 Characteristics Of Saboteurs

a. May be highly trained professionals or rank amateurs.

b. May be computer programmers, laborers, machinists, flight engineers, foremen, or members of the management.

c. May be specially trained enemy agents assigned a specific mission or individual enemy sympathizers, or disaffected natives who act for their own personal reasons or interests.

d. May work alone or in groups. They may infiltrate military or industrial groups as legitimate members, or they may work from the outside.

e. May or may not have affiliation with foreign or military groups.

f. May be discontented employees.

g. Very vulnerable to subversive propaganda.

h. Maybe mentally ill.

i. Actions cannot be predicted or anticipated.

j. Acts on impulse.

B-4 Characteristics Of Enemy Special Agents

a. Directed, trained, supported, and supplied by a sabotage organization.

b. Coordinate efforts in an overall attempt to impede or disrupt industrial potential.

c. May lie dormant for years awaiting desired opportunity.

d. The motivation of an enemy special agent or an enemy sympathizer is obvious. The motivations of disaffected natives are much more complex. Correspondingly such agents are more difficult to detect, and individual motives may be as varied as the personality.

e. Agents may work for:

- Pay
- Hatred
- Revenge
- Sincere beliefs
- Settling real or imaginary grievances
- Blackmail purposes.

B-5 Sabotage Targets

In choosing their targets, saboteurs are influenced by two basic considerations analogous to those found in a tactical situation; namely, the objective, and how best to attain it. Is the destruction of the target to be sufficient in itself, or is it but a contribution to a larger plan? The ultimate in sabotage is complete and permanent destruction of the target. When this cannot be attained there may be many lesser targets, and enough of these strategically grouped may achieve comparable results.

B-6 Target Analysis

In analyzing a sabotage target, the saboteur considers the following factors:

a. The importance of the installation or facility from a technical or military standpoint. Will its complete or partial destruction hinder or breach the overall defense?

b. When complete destruction is not possible, what specific items of technical or military importance will have the most crippling effect on the mission of the installation? Examples of such items are:

(1) Rail yards and train equipment.

(2) Transformers at power stations.

(3) Dies in machine shops.

(4) Pumps at waterworks.

(5) Condensers at steam power plants.

(6) Fuel pipelines.

(7) Weapons and ammunition storage points.

(8) Airfields and airstrips and their facilities.

c. The capability of a target for self-destruction is always attractive to a saboteur. Heavy rotating machinery, such as turboelectric generators, can be ruined by a disturbance of the shaft alinement or by placing abrasives in the lubrication system. Other examples of self-destroying targets include ammunition and gasoline dumps, dams, and warehouses containing inflammable stocks.

B-7 Methods of Attack

The following specific targets are vulnerable to one or more methods of sabotage:

a. Natural Resources.

(1) Mines may be sabotaged by causing cave-ins or flooding of the shafts or tunnels.

(2) Forests may be destroyed by incendiaries; fruit trees maybe killed by an induced blight.

(3) Farm produce is vulnerable to parasites and various blights, and on a smaller scale by the diversion of water used for irrigation.

b. Army, Navy, Marine, and Air Force Installations or Facilities. Any action against an armed forces installation or facility, which disrupts or prevents full accomplishment of its mission, constitutes a potential threat. Sabotage actions intended to destruct ammunition or fuel supplies, and to disrupt communications, are common to all of the armed services. Other targets are peculiar to each service, such as drydocks and repair facilities to the Navy, and complex flight and navigation equipment to the Air Force. Headquarters buildings and billets located outside the installation or facility are specific targets of terrorists and insurgents, especially by bombing and arson.

c. Industry. Industry presents innumerable possibilities for explosive and mechanical sabotage, and is especially vulnerable to acts that will initiate a chain reaction. The following are examples of means by which sabotage can be committed in industrial processes:

(1) Drainage of oil or blocking of lubrication pipelines.

(2) Introduction of abrasives into machinery.

(3) Missetting or damaging process control instruments.

(4) Introduction of small tools or other pieces of metal into moving gears.

(5) Explosive charges placed to have a shattering effect when detonated.

d. Warehouses and Supply Depots. Materiel in storage is subject to ordinary explosive or incendiary sabotage. There is also an opportunity for delayed sabotage by the introduction of abrasives, contaminants, or adulterants into the items stockpiled. This latter type of sabotage will not normally be discovered until the materiel is put into use, and is difficult to detect or trace.

e. Transportation. The propelling machinery and cargoes of land, sea, and air transportation are subject to acts of sabotage similar to those mentioned in paragraph c above. In addition, rail transportation can be sabotaged by damaging switches, rails, roadbeds, and various structural adjuncts, such as bridges, tunnels, and shop facilities.

f. Materials Intransit. Supplies or equipment of any type intransit may be sabotaged, either by sabotaging the, means of transportation or by directly attacking the materials, or both. A bomb or arson device placed in the hold of a ship may damage or destroy both the cargo and the ship. A bomb or arson device used against a railroad tank car may destroy the car, its contents, and a portion of the rail line. The same applies to POL pipelines.

B-8 Sabotage Methods

There are many ways to commit sabotage, and new methods and devices are constantly being adopted.

a. A **major sabotage effort** may be undertaken **after thorough study** of the physical layout of the facility and its production processes by technical personnel fully qualified to select the most effective method to strike one or more of the most vulnerable parts of the facility.

b. Sabotage may, on the other hand, be **improvised by the saboteur,** relying solely upon his own knowledge of the facility and the materials available to him. The device or agent selected for sabotage may range from the crude or elementary to the ingenious or scientific.

c. The methods of sabotage may be classifed as follows:

- ❑ Fire
- ❑ Explosive devices
- ❑ Mechanical devices
- ❑ Chemical
- ❑ Psychological.

(1) Sabotage by Fire. The malicious use of fire is one of the oldest methods of sabotage. It is one of the most effective methods because it can result in destruction of the evidence as well as complete destruction of the objective.

(a) By using a timing device, the saboteur can have time to leave the area and establish an alibi, and it is entirely possible that the fire itself will leave minimum identifiable traces of its causes.

(b) Personnel assigned firefighting duties must be trained to recognize the various incendiary materials which may be used, and in the use of the appropriate extinguishing agent(s). Assistance in such training can be obtained from post engineers and fire departments.

(c) Incendiary materials include:

- ● Phosphorous
- ● Sodium
- ● Thermite
- ● Potassium

(2) Sabotage by Mechanical Devices. Mechanical delay devices are frequently used with dry cell electric batteries.

(a) The basic idea in these mechanisms can be well represented by the use of an ordinary pocket watch. By removing the minute hand, setting a small screw in the crystal to a depth that it will contact the hour hand but not the minute hand, and using this screw and the main stem as contact points to complete the electrical circuit, the watch becomes a timing delay mechanism with a 12-hour span (figure B-1). This same principle is employed in the majority of mechanical delay devices.

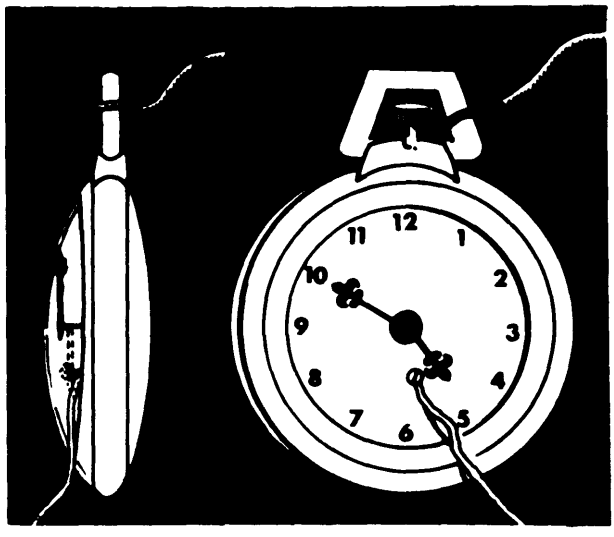


Figure B-1—Simple mechanical device.

(b) Other, and simpler delay devices can be devised, limited only by the ingenuity of the saboteur. For example, a rubber band may be used to hold the safety lever of a hand grenade in place. The pin is then pulled out, and the grenade is placed in a gasoline tank. The rubber band eventually rots, and an explosion and fire result. In a motor pool or refueling area, the widespread results can be disastrous:

(3) Sabotage by Explosives. The use of explosives achieves instantaneous, at least partial, destruction of the target, and the initial damage may be followed by a fire. The most probable targets are power and transportation facilities.

(a) Small quantities of explosives may trigger a chain reaction or destroy an extremely vital portion of an installation.

(b) One problem to the saboteur in explosive sabotage is the **difficulty of surreptitiously bringing explosives to the target.** For example, only approximately three pounds of an explosive can be concealed on a person. A saboteur may use any ingenious method to accomplish his mission.

(c) Explosives are readily available, and are used extensively in mining, agricultural, and some industrial operations. Also they are not difficult to produce, and the ingredients are readily procurable. These factors work to the advantage of the saboteur.

(4) Chemical agents may be easily introduced into installations by such means as air vents or heating systems. **Likely targets** for chemical agent sabotage are **installations employing highly skilled technicians.** Toxic chemical agents and incapacitating agents are highly effective and may cause employee productive efforts to be totally impaired.

(5) Psychological sabotage is most difficult to control or combat because it deals in intangibles and takes full advantage of normal human frailties. In its simplest form it is the implanting of a doubt or fear in the mind of an individual. It depends on natural rumor spreading for exaggeration and multiplication.

(a) Psychological sabotage may be employed effectively on a local scale to corrupt a unit or an installation. A definite distinction must be made, however, between manpower sabotage by psychological means, such as the instigation of strikes, slowdowns, and the like, and legitimate labor activities. Manpower sabotage of this nature is extremely difficult to detect. One disloyal employee engaged in psychological sabotage may influence others who will thereupon, believing in good faith that a labor grievance exists, engage in strikes and other activities resulting in loss of production.

(b) Another form of psychological sabotage is creation of panic through the

Common Explosives

Low Explosives

- Black Powder
- Smokeless Powder

High Explosives

- Nitroglycerin
- Dynamite
- Trinitrotoluene (TNT)
- Nitrostarch
- Composition C3 and C4

spreading of false, exaggerated, or distorted information or rumors. Panic has its basis in fear, and is usually the result of lack of knowledge of the truth or lack of confidence in leadership. In this type of sabotage, damaging rumors or surreptitiously distributed printed matter may be encountered by security forces who should be properly trained in countermeasures to combat this and other types of sabotage.

B-9 Sabotage Bombs

An explosive bomb itself is the unit of destruction and is not dependent upon outside aid as is an incendiary bomb; it is, therefore, normally larger than an incendiary bomb. However, the same ingenuity of disguise is applicable as in the case of an incendiary bomb.

a. Five sticks of dynamite taped together and equipped with a blasting cap would make an effective bomb, but upon sight would incite suspicion and concern. The same five sticks of dynamite stuffed in a suitcase with a dry cell battery and a clock-work delay device would be just as destructive, but would not attract attention.

b. A lump of plastic explosive coated with a mixture of shellac and coal dust would be unnoticed in a load of coal. The possible combinations of explosive, activator, delay device, and outside containers are many.

B-10 Bomb Handling

In any discussion of the handling, disarming, or disposal of sabotage bombs, it must be realized that the exterior appearance of a known or suspected bomb gives little or no indication of the explosive used or the manner of construction. Both of these key factors are largely dependent upon the availability of materials and the technical skill of the saboteur.

a. In view of the infinite varieties possible, it is obvious that no set procedure can be established for their handling. However, the primary consideration is the safety of life and property, and there are certain basic rules which must be followed.

b. Wherever the possibility of a sabotage bomb exists, there must be a **prearranged plan for coping with such an emergency** so that the following steps maybe earned out quickly and in many cases concurrently:

(1) Clear the area of all personnel, cordon the area, and establish a guard control around the danger zone.

(2) Send for technical help such as the explosive ordnance disposal unit, engineer personnel, or civilian police bomb squad.

(3) Immediately notify the security force headquarters.

(4) Shut off power, gas, and fuel lines leading into the danger area.

(5) Notify the fire department, medical service, MI and Federal Bureau of Investigation, as appropriate.

(6) Secure mattresses or sandbags for use as protective shields and barricades. Sandbags may also be used in confining and directing the force of an explosion.

(7) Remove flammable materials and small objects from the surrounding area. However, anything that might be connected with the bomb or might act as a trigger mechanism must not be touched.

(8) Arrange for the use of portable X-ray fluoroscopic equipment, which will be used by technical personnel only.

(9) See FM 19-5, chapter 12, and appendix D of this manual.

B-11 Countersabotage

Countermeasures against sabotage include, but are not limited to, the following:

a. Planning (chapter 1).
b. Risk analysis and evaluation (chapter 1).
c. Education (chapter 3).
d. Protective barriers (chapter 5).
e. Identification and movement control systems (chapter 4).
f. Searches of incoming vehicles (chapter 4).
g. Restricted areas (chapters 4 and 5).
h. Safeguarding classified information.
i. Investigation of securit y breaches (chapter 9).
j. Physical security surveys and inspections (chapter 17).
k. Of utmost importance is the building and maintaining of employee morale, informing employees of threatened dangers, how they may be recognized and what protective measures are available.