

## CHAPTER 13

### INSPECTION, STORAGE, TRANSPORTATION, AND HANDLING OF CLASS I SUPPLIES

#### GENERAL

The TISA loses accountability for subsistence when it leaves the warehouse. Warehouse personnel must supervise loading and unloading of vehicles carrying subsistence, and must be able to read and understand transportation documents. It is important that they be familiar with all types of carriers and know how the transportation system works. Food service personnel must inspect food supplies for identity, amount, and condition as they receive them.

#### SECURITY

Subsistence supplies must be protected to prevent loss by pilferage or theft during receipt, storage, and issue. Pilferage involves the stealing of small quantities of subsistence. Theft involves the stealing of large quantities of subsistence. Local regulations, past experience, and the degree of susceptibility to theft and pilferage must be considered when planning your security program. The installation provost marshal can assist you with your program. Pilferage can be controlled to some extent by such deterrents as training programs and inventory controls. Theft can be controlled by active physical security measures. Some of these measures are:

- A material control system which includes inspection of delivery and vendor vehicles.
- Quick investigation of losses.
- A key control program.
- Active security measures for highly pilferable items.
- Periodic trash removal rather than removal just at the end of the day.
- Empty containers inspected before removal.
- Cardboard boxes flattened.
- Minimum numbers of open and broken cases of subsistence.
- Physical security of windows and doors.

- Personal packages prohibited in storage area.
- Access to storage area limited to persons performing authorized duties.
- Personal lockers separate from food storage.
- Packaged operational rations locked up when not observable.

#### SAFETY

Accidents cost money through a loss of man-hours and damage or destruction of food and equipment. The resulting shortages of personnel, food, and equipment could also mean a shortage of food to the troops. Safety must be included in all scheduled training (see Chapter 6). Safety inspections must be a part of your regular routine. The type of building construction and local safety regulations affect your program. The installation fire marshal and a representative of the facilities engineers can help you in these areas. The general rules for safety in Chapter 8 should be included in your program.

#### INSPECTIONS

Subsistence supplies are inspected and reinspected from the time they are received until they are consumed. Inspection ensures that only food which is fit for consumption is issued or used in facilities. Several people are directly involved in inspection, but anyone who knows of spoiled food or improper storage or handling should report it to his supervisor.

#### Veterinary Service Personnel

VSP inspect all perishable subsistence as it is received at the TISA. VSP also inspect semiperishables at the request of the TISO. VSP inspect all subsistence that is being turned in by a customer or transferred from another activity.

They will inspect all fresh fruits and vegetables daily and all other perishables at 30-day intervals. Packaged operational rations are inspected according to frequencies established in DPSCM 4155-2. They will also inspect subsistence being transferred to another supply activity to ensure that it is fit for consumption. VSP also inspects carriers for sanitation and temperature requirements. If food has deteriorated or does not meet contract specifications, the VSP will recommend a course of action. They may recommend that items be force-issued, used for animal feeding, or destroyed. Besides inspecting the food, VSP inspect the packaging to ensure it is able to protect the food during storage and movement. Veterinary inspection is described in detail in AR 40-656, AR 40-657, and FM 8-30.

### TISO

The accountable TISO or his authorized representative will inspect all subsistence items before they are accepted. This inspection will ensure that the items are received in good condition and in the authorized quantities specified on the shipping document.

### Food Service Sergeant

The FSS or his authorized representative inspects all subsistence supplies before they are accepted. If the FSS feels that the supplies are not fit for consumption, he will request a veterinary inspection. In addition the FSS should ensure that forced issues are handled correctly and that identity, amount, and condition are checked.

**Forced-issues.** Forced-issue items must be issued at once to prevent loss to the government. The FSS must take force-issued items, but only in quantities that can be used before the next issue. Before force-issued perishables are stored, remove and discard any spoiled or damaged items.

**Identity check.** Before you accept any items issued to you, check to be sure the items are those that you ordered or authorized substitutions. Return unordered supplies to the delivery source.

**Amount check.** Check the amount issued by counting or weighing the items. When you receive an amount less than ordered, enter only the AMOUNT RECEIVED on the ration issue slip or other document that comes with the food. Let the issuing agency know at once. If you receive more than you ordered, return the extra supplies to the subsistence supply activity.

**Condition check.** When food is delivered, check its color, odor, and condition. If you believe that the food is not safe to eat, make a note on the issue document, and ask VSP to check the food. DO NOT throw out or destroy food until VSP tell you to. Report the amount of food you believe to be unfit on a DD Form 1608. VSP and the TISO will advise and assist you. ARs 30-1 and 30-16 provide details on preparing a DD Form 1608.

### TYPES OF INSPECTIONS

The types of inspections are visual, sampling, and full. They are described in this paragraph.

#### Visual

In visual inspection, the inspector looks at the outside of the supplies or their containers to see if there is damage or deterioration. Damaged containers (dented cans, broken boxes) are a sign of mishandling. Check bags and boxes of material that could be infested for insects along seams and under flaps. Finding damaged or infested containers is a good reason to request a veterinary inspection. Unusual smells may also be a sign of spoilage. The visual inspection is the type usually performed by food service and supply people.

#### Sampling

Sampling inspections are usually performed by VSP. The inspector chooses a number of units at random and inspects them thoroughly. If many of the samples are damaged or deteriorated, VSP will perform a full inspection. The TISO issues items for veterinary sampling on DA Form 3161 and posts them to the VRGC as an identifiable loss. (See AR 30-18.)

## Full

In a full inspection, VSP thoroughly examine all units of a particular item or shipment. Those which are damaged or deteriorated are set apart and the TISO is advised on the recommended disposition. Full inspections should not be conducted unless they are absolutely necessary.

### INSPECTION OF DETERIORATION OR DAMAGE

Inspections for deterioration or damage must be conducted for TISA and dining facility subsistence. These inspections are discussed in this paragraph.

#### Troop Issue Subsistence Activity Inspection

TISA subsistence is inspected as described below.

**Inspecting canned goods.** Individual cans should be inspected whenever there is a reason to think they may be damaged. If boxes are broken or bent, they should be opened, and each can should be inspected. Cans that have been stored for long periods of time or exposed to extreme temperatures should be looked at too. Cans that are leaking or dented should be inspected by the veterinarian.

**Inspecting other semiperishables.** Semiperishable subsistence will spoil if it is mishandled, improperly stored, or stored for long periods. Boxes, sacks, bags, and other containers should be looked at closely. The inspector should look for signs of insects or rodents, color changes in contents of jars or clear bags, moisture damage on boxes or bags, and damaged containers. If any of these signs are present, call VSP.

**Inspecting fresh fruits and vegetables.** Fresh fruits and vegetables should be inspected when they are received and every day while they are in storage. The inspector should keep these points in mind:

- Size is not a good sign of quality. Many vegetables become woody or hollow as they age.
- Appearance may be deceiving. Fruits and vegetables that have a pretty surface may be rotten

inside. The best way to determine their quality is to taste them.

- Slightly damaged fruit or vegetables should be issued right away if they are going to be used at all. Once deterioration begins they will deteriorate quickly.

- Before you store fresh fruits and vegetables, remove those that are spoiled or damaged. Store those which require refrigeration, leaving room for air to circulate. Refer to DOD 4145-19-R-1 for recommended storage temperature and handling.

**(NOTE: Direct storage of foods on refrigerator shelves is prohibited. Use original containers or place items in a suitable storage container. Only unpeeled, hard-skin fruits and vegetables may be stored uncovered.)**

**Inspecting frozen subsistence.** Frozen items should be frozen solid when they are received. The packages should be checked for ice on the sides, top, and bottom. Ice on packages means the subsistence has thawed and been refrozen. It should be checked by the veterinarian.

#### Dining Facility Subsistence Inspection

When picking up rations at the supply activity, personnel should check all items for signs of possible contamination. If rations are delivered to the dining facility, check them immediately upon receipt. Make sure that there is enough refrigeration, freezer, or dry-storage space available for foods received. Food service personnel must follow proper food inspection procedures. They should know how to check food quality, check for proper temperatures, and detect potentially damaged goods. Food service personnel must ensure that they inspect the following items as described below.

**Meat and poultry.** Check meat and poultry to see if they are the same as those listed on the issue slip. Inspect meat and poultry for odor, color, damage, and slime. The odor should be mild, the color normal. There should be no damage or slime.

**Milk and milk products.** All products should be checked for proper temperature and condition.

The temperature of the milk and milk products brought to your dining facility should not be above 45° F. Reject broken or leaky containers. Butter should have a uniform color, firm texture, and be free of mold or specks. Cheeses should be checked for uniform color and unbroken packaging. Bottles and cartons should be free of grease or dirt. Bulk milk containers must be delivered with both seals in place and with all rubber or synthetic parts protected from contamination. Check the expiration date stamped on the package.

**Bread and baked products.** Check the date code on baked items before accepting them. Your FA will provide you with a code used by the vendor. Post it so that the person who is checking can refer to it easily.

**Dry stores.** Check dry stores, such as cereals, flour, and sugar, for signs of exposure to grease or moisture or contamination from insects, rats, or mice. Return open containers to the source of supply unless it is clear they were opened during ration breakdown. If a container is discolored, open it and make sure the food is not damaged or spoiled. If the outside of the container is damp or moldy the inside contents may also be moldy.

**Canned goods.** Check the condition of the container in which the cans are packed. If the container is crushed or torn, open it and check the cans for holes and rust. Do not accept damaged cans. Return them to the source of supply and ask for replacements. Check for swollen tops or bottoms, leaks, flawed seals, dents, or rust.

**CAUTION**

A can that seems undamaged on the outside may still be contaminated. If, when the can is opened, the contents appear abnormal in color, odor, or texture; are foamy or have a milky-colored liquid--**DO NOT USE THEM. DO NOT EVEN TASTE THEM!**

**Fresh fruits and vegetables.** Check fresh fruits and vegetables for mold, wilt, rot, and other defects. Remove the bad items, and store the rest. Fresh fruits and vegetables should also be checked for signs of insect infestation. **DO NOT** remove them from the shipping container unless they are

needed within 24 hours. When vegetables (except onions) are removed from the shipping container, they should be trimmed, washed, drained, placed in a covered container, and refrigerated as quickly as possible. Never allow vegetables, except potatoes, onions, and garlic, to stand at room temperature for any length of time.

**Frozen Subsistence.** Frozen items should be frozen solid when they are received. The packages should be checked for ice on the sides, top, and bottom. Ice on packages may indicate that the subsistence has thawed and been refrozen. It should be checked by VSP. When they have defrosted, they must be used right away. They should never be refrozen. Freezer temperatures should be checked at least once a day.

**UNSATISFACTORY SUBSISTENCE ITEMS**

If subsistence does not meet the terms of its purchase contract, if it has been badly packaged, or if it has been improperly stored or mishandled, it should be reported according to the procedures in AR 30-16. Report shipment-related damage as described in AR 30-18, Table 7-2.

**TISA STORAGE**

The main cause of waste in storing food is poor management. Subsistence supplies should be stored so they are accessible and secure. The warehouse manager of the TISA should maintain a stock locator system and plan for use of space. He will be responsible for the security of stocks from theft and damage.

The TISO should have a planograph for each floor of every warehouse. Each floor will have short rows and long rows (Figure 13-1, page 13-5). Each short row meets each long row at a single grid square (Figure 13-2, page 13-6). Due to safety and sanitation requirements, the plan must be approved by the DEH.

Each single grid square represents storage space for one 40- by 48-inch pallet with 6 inches on each side for overhang. If pallet racks are used, pallets may be stacked to a number of levels.

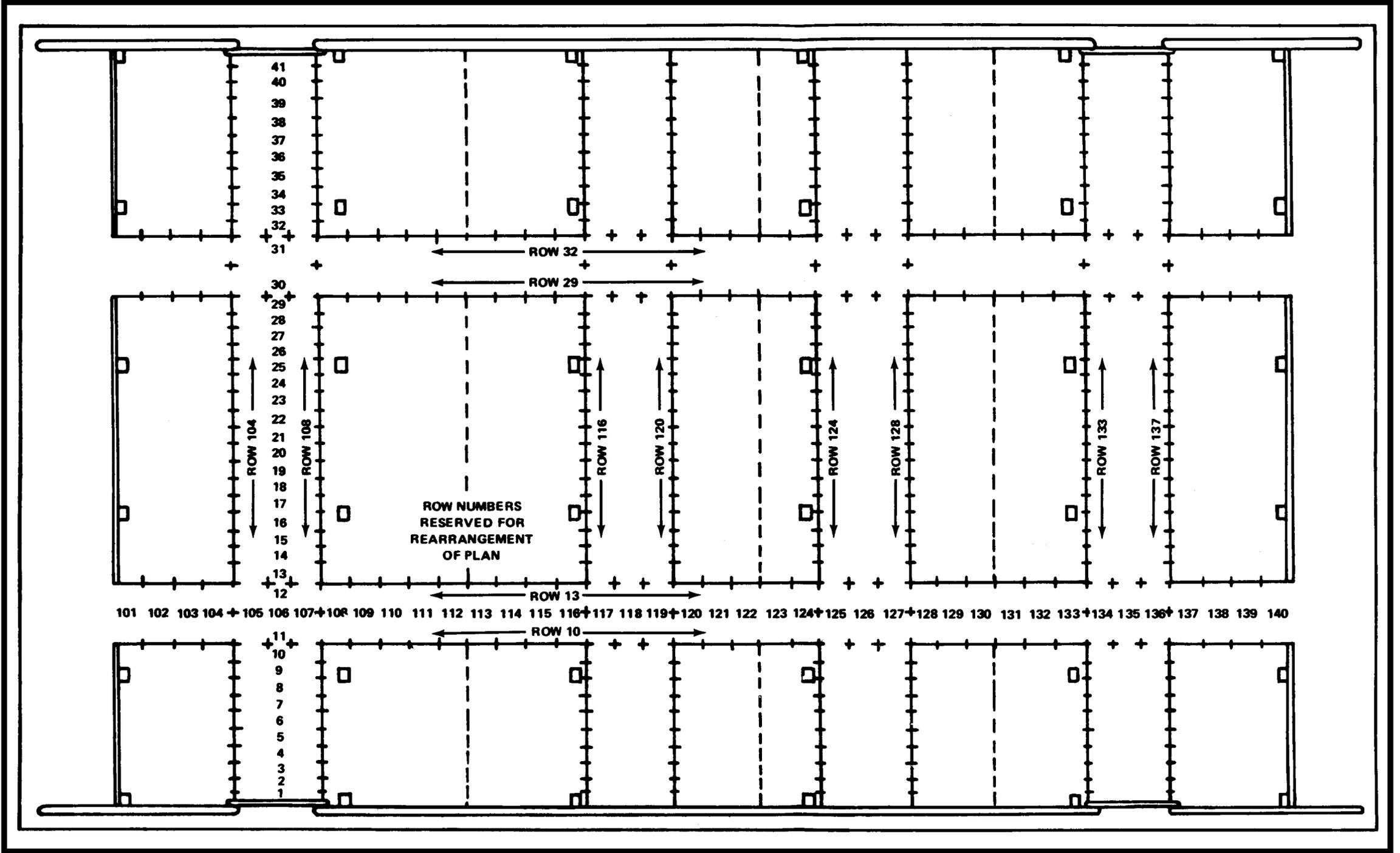


Figure 13-1. Typical planograph for dry bulk storage area

The warehouseman needs information to help him locate a particular pallet. He must know what building it is in, which floor it is on, at which grid square, and at what level. A nine-digit code is used to locate warehouse stocks. Figure 13-3 (page 13-6) shows how to read the code.

This code may be changed to meet the needs of your operation. For instance, a one-floor warehouse would require only an eight-digit code, as there would be no need for a floor code. Code stock not stored on pallets by bin or drawer.

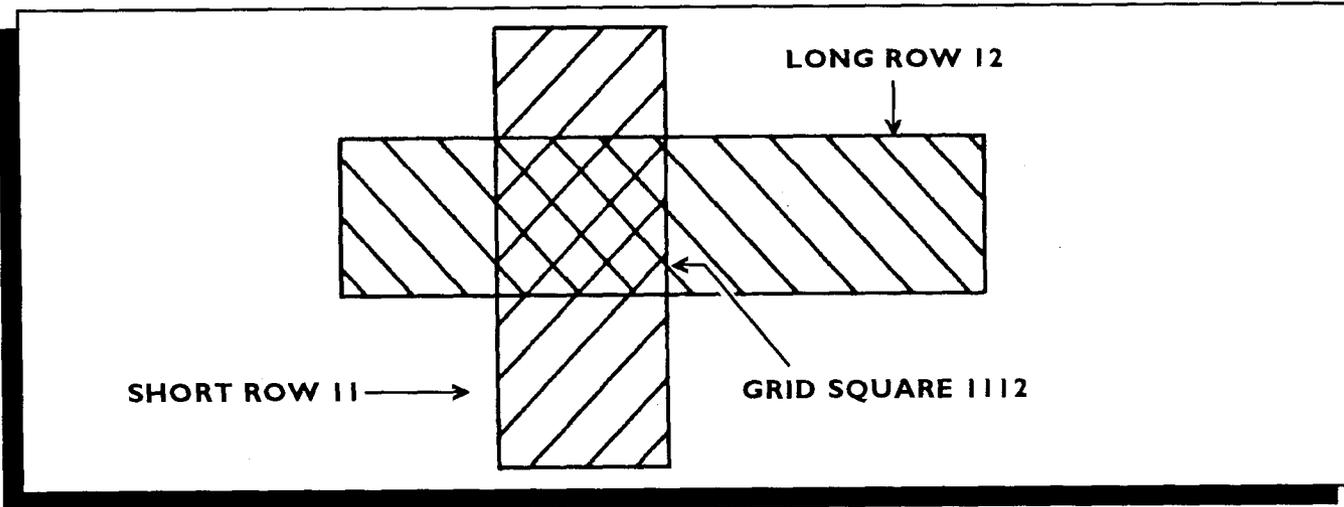


Figure 13-2. Planograph grid square

|                     |       |         |              |             |       |
|---------------------|-------|---------|--------------|-------------|-------|
| 23                  | 1     | 4       | 56           | 73          | B     |
| BUILDING<br>OR AREA | FLOOR | SECTION | SHORT<br>ROW | LONG<br>ROW | LEVEL |

Figure 13-3. Reading the stock location code

The TISA should receive an advance copy of the shipping document before each shipment arrives. This copy is used to plan where each item on the shipment should be stored. Check the stock locator file, and mark the planned location on the shipping document. If the shipment is a large one, physically check the planned location to ensure that enough space is available.

### ACCESSIBILITY

When establishing a layout plan for a new warehouse or supply point, remember that ease of issue is of utmost importance. Store stocks in the same order that they are listed on the preprinted issue slip if material will be released with the issue slip. This will make it easier for the stock picker to follow a direct route in selecting items. It will save man-hours, fuel, and wear on MHE. If you are having problems with stock-picking in an existing warehouse, you may consider having issue documents retyped so that the list is in the same order as the rows of supplies. If this is impossible, urge stock pickers to note locations and plan routes before they start. If your warehouse issues items on punch cards prepared as MROs, arrange the card deck in warehouse-row-sequence before selection of stocks.

### MARKING OF STOCKS

All stocks must be clearly marked. When items are received, check for date of pack or expiration date on cartons. Date of pack is the date the units were placed in cartons. Expiration date is the date by which they must be used. If newly arrived items are not properly marked, you should have them marked at the receiving area before they are stored. Each pallet lot should be marked with the date of receipt. This will allow stock pickers to use the first-in, first-out principle. If you color code pallet lots by month of receipt, you will be able to identify items in need of rotation or condition classification. Make sure to check date of pack and expiration date as well as date received.

### LOCATOR RECORD ACCURACY

Sometimes you may not be able to issue an item that you have on hand either because it has been stored in the wrong place or because its storage location has been recorded wrong. If you do not keep a record of quantity on hand in the warehouse files, you may not know whether a materiel release denial is the result of bad location records or a zero stock balance. You can find out by checking with the control branch of the TISA. If there is a balance on hand, you have a locator problem. Find the stock and adjust location records. You should also perform a location survey before each inventory. A location is a comparison of the stock in the warehouse with the data recorded in the stock locator file. There is a locator card for each occupied location. Matching the cards with the stock will turn up any discrepancies in location, unit of issue, condition code, stock number, physical security and pilferage code, or recorded shelf life. Use this information to update stock locator files.

### STACKING OF ITEMS

Most subsistence supplies arrive at the appropriate warehouse on pallets 40 to 48 inches. Pallets permit the stacking of items in an easily handled unit load. The supplies are arranged on the pallet in a standard pattern based on the size and shape of the item so that all the pallet area is used with as little as possible left over. Supplies may be damaged by the MHE used to move the loaded pallet. Other factors to consider when stacking the pallets are as follows:

- The height of the stacks is limited by the stability of the product and its resistance to crushing.
- Floor loads must be reconsidered. For example, concrete floors can support more weight than wooden floors.
- Below an automatic sprinkler system, when the height of the stack is 15 feet or less, there must be an overhead clearance of 18 inches. With heights of more than 15 feet, there must be an overhead clearance of 36 inches.

- When there is no automatic sprinkler system, there must be a clearance of 36 inches regardless of the height.
- There must be an 18-inch clearance around light fixtures and heating fixtures.
- Material cannot be stored within 36 inches of a fire door opening or 24 inches of a substandard fire wall.
- Bagged items and those needing fumigation and insect control should be stored away from walls and corners to leave room for fumigation and cleaning.

### LOOSE ISSUES

Cases of subsistence that have been opened to issue less than a full case should be stored in a loose-issue area to be issued first. Damaged items that still have value can also be stored in this area. Rack steel shelving, drawers, or bins may be used to store these small quantities, crushable containers, and loose cans.

### PRESERVATION OF SEMIPERISHABLE SUBSISTENCE

Semiperishable subsistence is not as likely to spoil as perishable subsistence. However, the safe storage period varies depending on such elements as temperature, humidity, care in handling, protection from weather, quality of the food when received, and packing. Safe storage periods become very uncertain at extremes of temperature. FM 10-23, Appendixes D and E list approximate keeping times for semiperishable A Ration items and B Ration components.

#### Insects (Roaches, Flies, Weevils, Moths)

Foods stored at temperatures between 60° F and 90° F are especially attractive to insects. Infested supplies should be segregated until a veterinarian can determine if they should be used or destroyed. Roaches and flies not only contaminate the subsistence but spread disease as well.

### Rodents (Rats and Mice)

Rodents physically destroy food and contaminate it with their excreta and hair. The best method of control is to prevent entry of these animals.

#### Freezing

Dry products such as grains, cereals, and dehydrated foods are not usually damaged by freezing. If foods contain relatively large amounts of water, freezing may soften the consistency and texture, and the appearance may suffer. Emulsions such as canned cheese and butter, prepared mustard, and mayonnaise may separate because of freezing but can still be used.

#### Heat

A high-storage temperature encourages bacterial growth, mold growth, and insect infestation. Canned foods spoil more quickly, flour and related products are more likely to become insect-infested, and some items become rancid.

#### Humidity (Moisture)

High humidity speeds the growth of bacteria and molds, promotes insect infestation, and causes mustiness in flour, rice, and similar food. High humidity also causes items like sugar and salt to cake and become hard and leads to rust forming on cans.

#### Light

Products packed in glass or transparent containers may be damaged by light. Exposure can cause color changes and affect the flavor of foods containing edible oils and fats.

### PRESERVATION OF PERISHABLE SUBSISTENCE

Perishables must be refrigerated. This eliminates some of your keeping problems since the refrigerator protects the food from insects, rodents, and light. However, perishables are very sensitive to temperature changes, so you must check thermometers regularly. Food which has spoiled

must be removed immediately. Do not order more than you can reasonably expect to use between issue cycles. FM 10-23, Appendixes B and C list approximate storage life for frozen items and items that must be refrigerated. DOD 4145.19-R-1 contains more information.

### THE TCMD

Subsistence stocks that move through military terminals are controlled by the defense transportation system until they are received by a consignee, such as a TISA. Such stocks are accompanied by a TCMD. You may also use the TCMD as a request for transportation support. The warehouse supervisor must be able to read and interpret this document. Make sure you document any discrepancies in number of pieces, weight, or cube and list any damages before signing for the cargo. If you need to decode any of the entries on the form, see DOD 4500.32-R.

### PRINCIPLES OF HANDLING

Whether the TISA is receiving, storing, packing, or shipping perishable or semiperishable items, some important principles must be recognized. They are discussed as follows:

- The least handling is the best handling. This saves time, cost, and potential material damage and it reduces accidents.
- Standardize your equipment and operating procedures. Maintenance and repair costs are reduced and storage and issue procedures simplified when your people are all working from the same plan.
- Choose the right machine for the job. Equipment capabilities are detailed in the operator's manual. Consider the number of items to be moved, weight, and distance.
- An essential phase of any program is planning for weather and transportation restrictions and to reduce safety hazards.
- Never exceed your equipment capacities. Equipment overload increases maintenance,

repair, and replacement costs and the risk of accidents.

- If moves are short and irregular, it may be more economical to use manpower.
- Loading and unloading materials with mechanical devices, when properly done, will reduce safety hazards and decrease subsistence damage.

### USE OF MHE

The TISA may have a wide variety of MHE available at a subsistence supply activity. A good understanding of the capabilities and limitations of these machines will help plan for their use, operation, and maintenance. TISA personnel should be licensed to operate MHE and practice using it.

### TYPES OF MHE

The two types of MHE are nonpowered (see Figure 13-4, page 13-10) and powered. They are described in this paragraph.

#### Hand-Operated or Nonpowered MHE

Hand-operated and nonpowered MHE include:

- Four-wheeled platform truck or warehouse trailer.
- Roller conveyor.
- Skate wheel conveyor.
- Two-wheeled hand truck.
- Handlift truck or pallet jack.

#### Powered MHE

Powered MHE includes forklift trucks and tractor-trailer trains.

**Forklift trucks.** A forklift truck is a vehicle designed to pick up, carry, and stack supplies up to five pallets high. Forklift trucks are available with lifting capacities from 2,000 to 50,000 pounds and lifting heights from 100 to 252 inches. Gasoline-powered forklift trucks may be equipped with solid rubber or semisolid tires for use in warehouses or pneumatic tires

for use in outdoor storage areas. The exhaust fumes from gasoline-powered trucks may contaminate the food items and are toxic to personnel in an enclosed area. Subsistence warehouses will use the electric-powered forklift trucks that are equipped with solid rubber or

semisolid (or cushion) tires for indoor operation only.

**CAUTION**  
Gasoline-powered forklift trucks are not recommended for indoor subsistence storage areas.

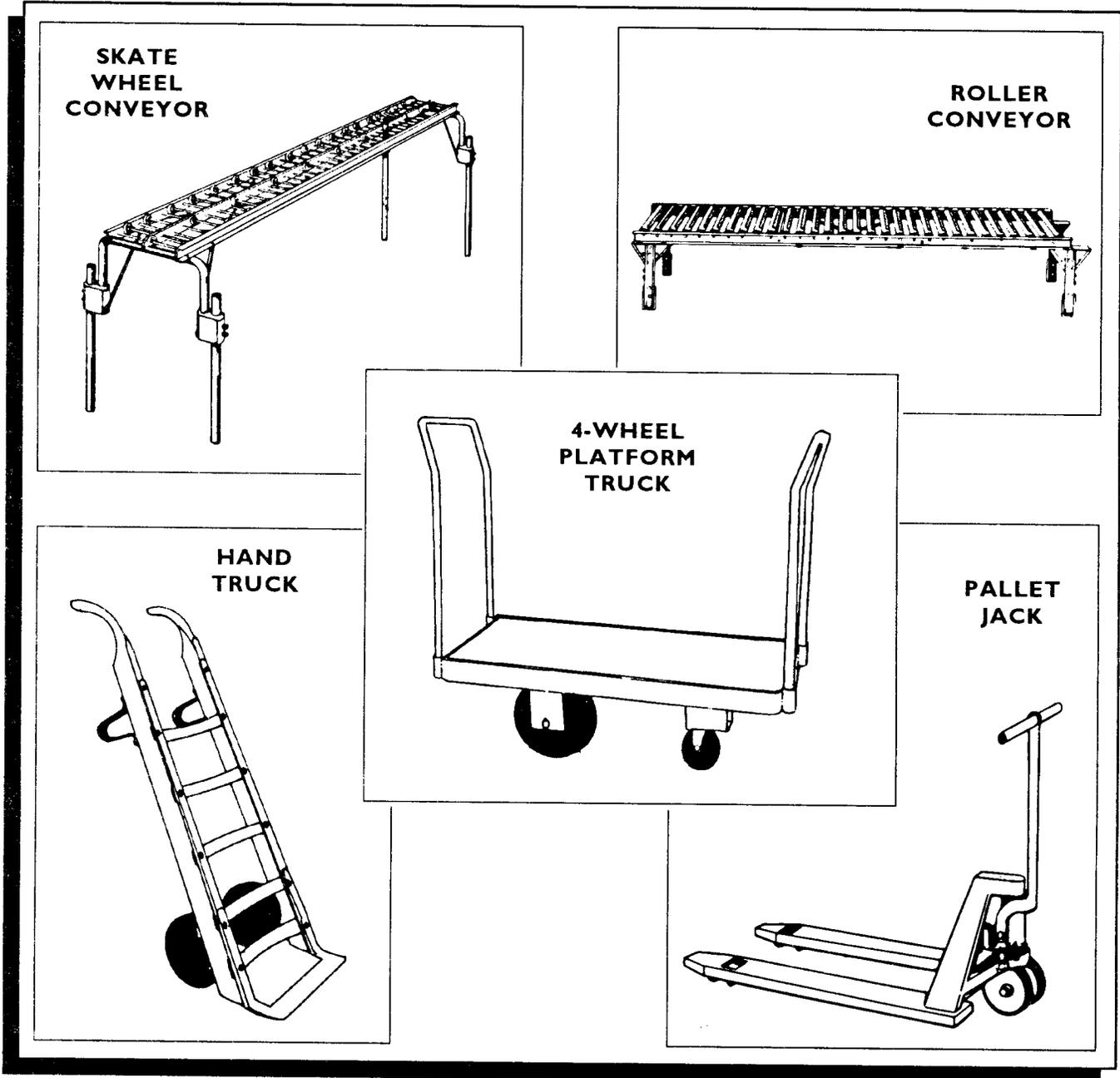


Figure 13-4. Hand-operated or nonpowered MHE

**Tractor-trailer train.** Use the tractor-trailer train to haul loads for distances of more than 400 feet in warehouses or on flat, hard-surfaced outdoor storage areas.

## MHE SELECTION

It is important for warehouse personnel to choose the right machine for the job. Some things to consider are work load, distance, and the storage site.

### Work Load

For a one-time short lift of light supplies, use a hand pallet jack or dolly. Place roller conveyors along routes that are used regularly to move small packages. Do not exceed MHE load capacities.

### Distance

Forklift trucks should be used only for moves of 400 feet or less. For longer moves, use the tractor-trailer train or a truck.

### Storage Site

A wooden environment will require a machine with a good turning radius, such as a forklift that is capable of the crabwalk or one that can pivot. Use electric-powered forklifts in warehouses when possible.

## VEHICLE LOADING AND UNLOADING

A little planning in this phase of TISA operation saves time, money, and effort. It will also help keep subsistence stocks from being damaged in transit or by mishandling.

To load, first determine the capacity of the vehicle by looking at the operator's manual. Next, take a look at the cargo. Determine the best way to load it. If the shipment will include items of various sizes, shapes, and weights, you may want to draw a loading plan showing how all items will fit. Ensure that the load is balanced on the vehicle.

When packing refrigerated vans or containers, make sure you allow for the type of cargo.

When loading or unloading, ensure that the carrier is as close to the storage location as possible and positioned properly. You may need a bridge plate or ramp. If so, install the plate or ramp, and heed all safety precautions. The carrier will then be loaded with the MHE according to plan.

When unloading the MILVAN, move the ramp to the doorway of the MILVAN and line up the holes in the ramp with the holes in the floor of the MILVAN. Put the locking pins through the holes. This will keep the ramp from moving.

Whether loading or unloading, supplies, be sure to observe the principles of materials handling.

## STORAGE OF FOOD WITHIN DINING FACILITIES

Except for forced issues, the dining facility receives only foods that are in good condition. To keep them that way, store both perishable and semiperishable foods as soon as they are inspected. Keep food in good condition by storing it right and using it as soon as possible, even if you have to make some changes in your menu. To prevent loss of quality, and even loss of subsistence due to spoilage, follow these rules for food storage:

- For all types of foods, except bread, follow the "first-in, first-out" rule. Use foods in the order you receive them.
- Keep perishable potentially hazardous foods out of the temperature danger zone (between 45°F and 140°F).
- Store foods in areas designed for storage. Do not store food products in toilet areas or under stairways. Also do not store foods with cleaning products or pesticides.
- Keep all subsistence in clean containers or wrappers. Do not reuse packaging.
- Never allow vegetables, except potatoes, sweet potatoes, hard-rind squash, eggplants, rutabagas, onions, and garlic to stand at room temperature for any length of time.

### Storage Areas

Store semiperishables in storage areas that are clean, dry, well-ventilated, odor free, and free of insects and rodents. Do not store open containers of flour and sugar on shelves. Put them in tightly covered containers. If you store flour and sugar in galvanized cans, line the cans with clean, disposable, food-grade plastic liners. Leave the flour and sugar in their original containers and place the containers into the lined cans. Proper temperature and humidity are critical for the safe storage of canned food. High temperatures are likely to accelerate bacterial action and food deterioration, and excessive moisture may cause the cans to rust. In addition, you should--

- Store food products at least 6 inches above the floor on shelves, racks, dollies, or other easily cleanable surface.
- Keep food away from the wall. This discourages pest harborage and eases cleaning.
- Place heavy packages on lower shelves.
- Place the most frequently needed items on lower shelves, near the entrance.
- Rotate inventory on first-in, first-out basis.
- Keep storage areas clean and dry.

#### **WARNING**

**Storing flour or sugar in an unlined galvanized can may result in food poisoning.**

### Perishables

When you store perishables, consider the temperature, humidity, air circulation, and sanitation needed to keep the food from spoiling. Store refrigerated foods at the prescribed temperature.

Keep a thermometer in the refrigerator or freezer, and check the temperature often. Frozen food should be stored at 0°F or below. The best storage temperature for ice cream is -10° F. Frozen food temperatures should not be allowed to rise above 10° F while they are being transported.

Arrange the items so that air can move around them. Store the oldest items at the front of the shelves, and use them first. Keep foods with strong odors (such as garlic and onions) away from foods that absorb odors (such as butter).

To keep refrigerators and freezers operating efficiently, keep them clean, especially their door gaskets and refrigeration coils. There should be a buildup of no more than a quarter of an inch of ice on the inside of the freezer or freezer compartment.

Always store the most hazardous foods below the least hazardous foods. This prevents contamination from products such as raw chicken blood dripping onto products such as lettuce, which is eaten raw.

Do not store food directly on the floor of the refrigerator.

Do not store packaged food in contact with water or undrained ice.

Check fruits and vegetables daily for spoilage.

### Eggs

Fresh eggs must be stored in a refrigerator. Do not store eggs near foods which have strong odors. Keep frozen eggs in a freezer. Egg solids do not need refrigeration. Keep them in a cool, dry place, and use them before their expiration date.

### Milk and Dairy Products

Refrigerate milk, cream, butter, cheese, and margarine. Butter absorbs odors and must be stored away from foods with strong odors. If cheese is frozen, the taste becomes flat and the cheese becomes dry and crumbly, but it still can be used.

### Bread and Pastries

Store bread and pastries on shelves in a cool, dry place. Pastries with fillings or frostings made with eggs or milk must be refrigerated until they are served.

### Fruits and Vegetables

Most fruits and vegetables need to be stored under refrigeration. Some exceptions and special-handling considerations are--

- Bananas, apples, avocados, and pears ripen best at room temperature.
- Potatoes and onions should be stored in a cool, dark, dry place. Onions should not be stored with potatoes or moist vegetables.
- Berries, cherries, grapes, and plums should not be washed prior to refrigeration, as the moisture increases the possibility of mold growth.

### STORAGE OF POISONOUS AND TOXIC MATERIALS

Only those poisonous and toxic materials normally required to maintain the sanitary condition

of the dining facility and its equipment and utensils are permitted in any area of the facility. Retain PTMs in their original container. Also --

- Label PTM containers prominently and distinctively for easy identification.
- Use PTMs only according to label instructions.
- Store PTMs in a locked cabinet labeled with the words "*HAZARDOUS MATERIAL STORAGE.*"
- Do not store or use chemical pesticides in the dining facility. Only certified and authorized individuals may apply pesticides in a food service establishment.
- Do not store personal medications in food storage, preparation, or service areas.