

## RECOVERING CENTER WORKER



### UNIT 2 – SORTING AND DISMANTELING PROPERTIES OR SUB-ELEMENTS



This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

## Training Repository – unit 2 – 14h (in class)

The aim of this unit is to promote the understanding of families of objects (bulky) and sub-elements of objects. It also will help the learner to find the steps needed to sort and dismantle objects and also the techniques involved to perform these tasks.

- Recognize the assets and its sub-elements that can be dismantled
- Ensure operations to dismantle assets / sub-items
- Provide operations to handle bulky sub-elements

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# I. List of Personal Protection Equipment

## Panels of obligation for the use of PPE

Personal Protective Equipment (PPE) is a device or means intended to be carried or maintained by a person to protect it against one or more risks likely to endanger its safety and its health.

The risks can be of different kinds: chemical (Dust, vapor, solvent...), mechanical (Shock, cut, projection...), electrical, thermal, biological, ionizing radiation or not (infrared, laser, ultraviolet), noise....



Eye protection



Safety helmet



Ear protection



Mandatory respiratory protection



Safety footwear



Gants de protection



Protective clothing



Protective visor



Safety harness



Mandatory pedestrian crossing



General obligation (if appropriate, supported by an additional panel giving further instructions)



See instructions, manual

## Identification of Safety pictograms



Smoking ban



Open flames ban



Pedestrian restriction



Extinguishing fire with water restriction



## Emergency rescue Panels



Firefighting equipment



Fire alarm point



Fire hose



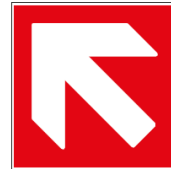
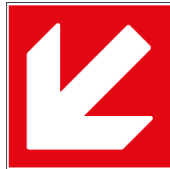
Ladder



Extinguisher



In case of fire phone



Directions to follow  
Additional indicating signals to other panels about firefighting equipment



Environmental pollutant



Dangerous, harmful and irritating



Corrosive



Combustion



Explosive



Dangerous Product for health



Toxic



Gas under pressure



Flammable

Source : [www.inrs.fr](http://www.inrs.fr) (Institut national de recherche et de sécurité)

## Dangerous behavior



You will be required to work with electromechanical machines that are dangerous in case of improper handling.

Take care of the necessary protections, make slow movements while maintaining a perimeter, check the condition of your tools, never leave a machine running if you do not use it, unplug them after use.

You must always equip yourself with the PPE necessary for the activity and the manipulation of the tool you are going to use. In case of doubt, the technical manager is here to inform you.

## Accident management

Protect :	Alert rescue
<ul style="list-style-type: none"> <li>✂ Neutralize the cause</li> <li>✂ Keep the individual at risk</li> <li>✂ If loss of consciousness appears: lateral security position</li> <li>✂ If respiratory arrest appears: remove what prevents to breathe and tilt the head back</li> </ul> <p>Only people having Certificate of Training in First Aid can do these manipulations.</p>	<p>Emergency call:</p> <ul style="list-style-type: none"> <li>✂ Rescue:</li> <li>✂ Firefighter:</li> </ul> <p>Message:</p> <ul style="list-style-type: none"> <li>✂ Address, location</li> <li>✂ Cause of the accident</li> <li>✂ Number, person(s)'s condition and age</li> </ul> <p>Send people find rescue.</p>

## Hazardous materials storage

Defaulting storage may have significant consequences: dangerous chemical reactions, important release of harmful products, even explosion or fire, intoxication, one-foot fall, injuries... Many parameters are involved in storing security:

- ✓ Quantity of products stored,
  - ✓ Presence of volatile, flammable or incompatible products or with the materials present,
  - ✓ Ventilation,
  - ✓ Packaging stowage,
  - ✓ Packaging products stability to changes in temperature, radiation...
- ✓ Signalling

Storage locations must be clearly identified. Warning panels must appear at the entrance as for example « Flammable materials », « Corrosive materials », « Toxic materials » ...




































































































- ✓ Separating incompatible products / Dangerous reactions




Some products can react with each other, sometimes causing explosions, fires, projections or emissions of dangerous gases. These incompatible products must be physically separated.

Other products still **react violently with water**: they must be stored in such a way that any contact with water is impossible, even in the event of flooding. Flammable products must be stored separately in a dedicated and constantly ventilated enclosure.

If a product has several hazard pictograms: consider, the following order: explosive > combustion > flammable > corrosive > toxic > harmful > irritating.

Inform yourself: even if they display the same pictogram, some products may not be stored together. See the safety data sheet (SDS), the operating instructions, storage and safety instructions or contact your supplier.

-  Cannot be stored together
-  Can be stored together under certain conditions
-  Can be stored together

Source : Table designed and directed by Effcience Santé au Travail (Décembre 2013)

## Pallet disassembly

### Specific security Equipment



Safety footwear



Safety gloves



Eye protection



Protective clothing

## II. Specific Tools and their use



Ergonomic lever arm





Crowbar



Hammer



Pliers



Nail punch

## Advices

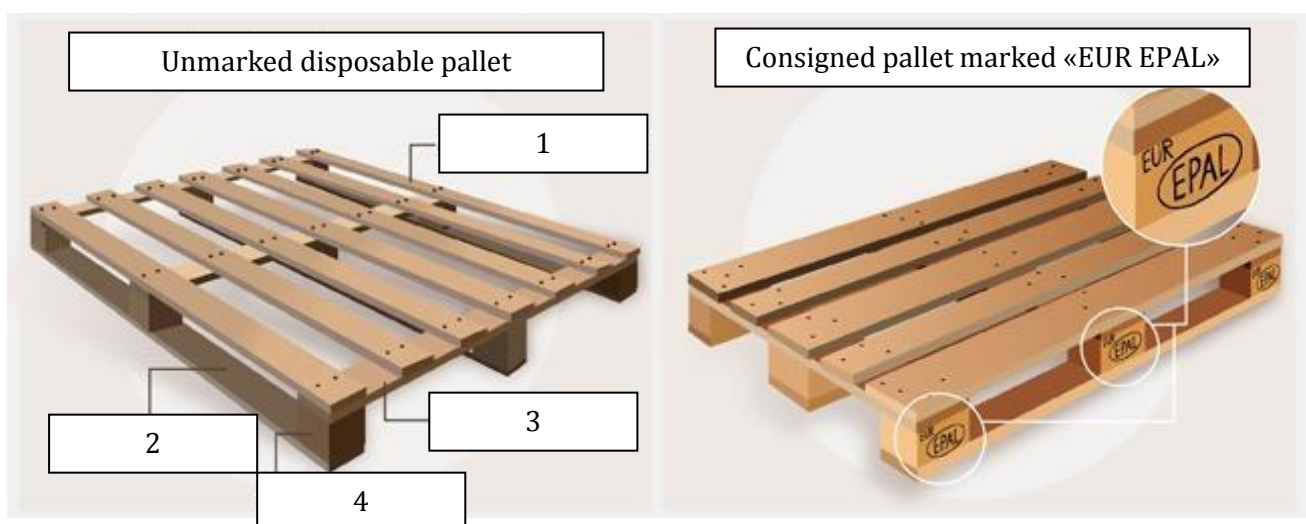
- ✓ The transport of the pallet is always done with handling gloves (high risk of splinters and nails). If needed, 2 people to handle the pallets.
- ✓ Dismantling pallets with a lever arm: the size of the lever arm and the position induces the reduction of musculoskeletal risks of the trainee / worker; failing this, use of the crowbar
- ✓ Wear safety glasses required because of risk of scattering wood chips
- ✓ Use a pallet removal tool. This tool is preferable to the crowbar not only for ergonomic reasons (less effort) but also because it avoids breaking the wood (raises the boards on a larger surface)



## Dismantling the pallets to extract the deck boards

Separation of the different woods constituting the pallet:

1. Top deck board
2. Bottom deck boards
3. Runner
4. Blocks



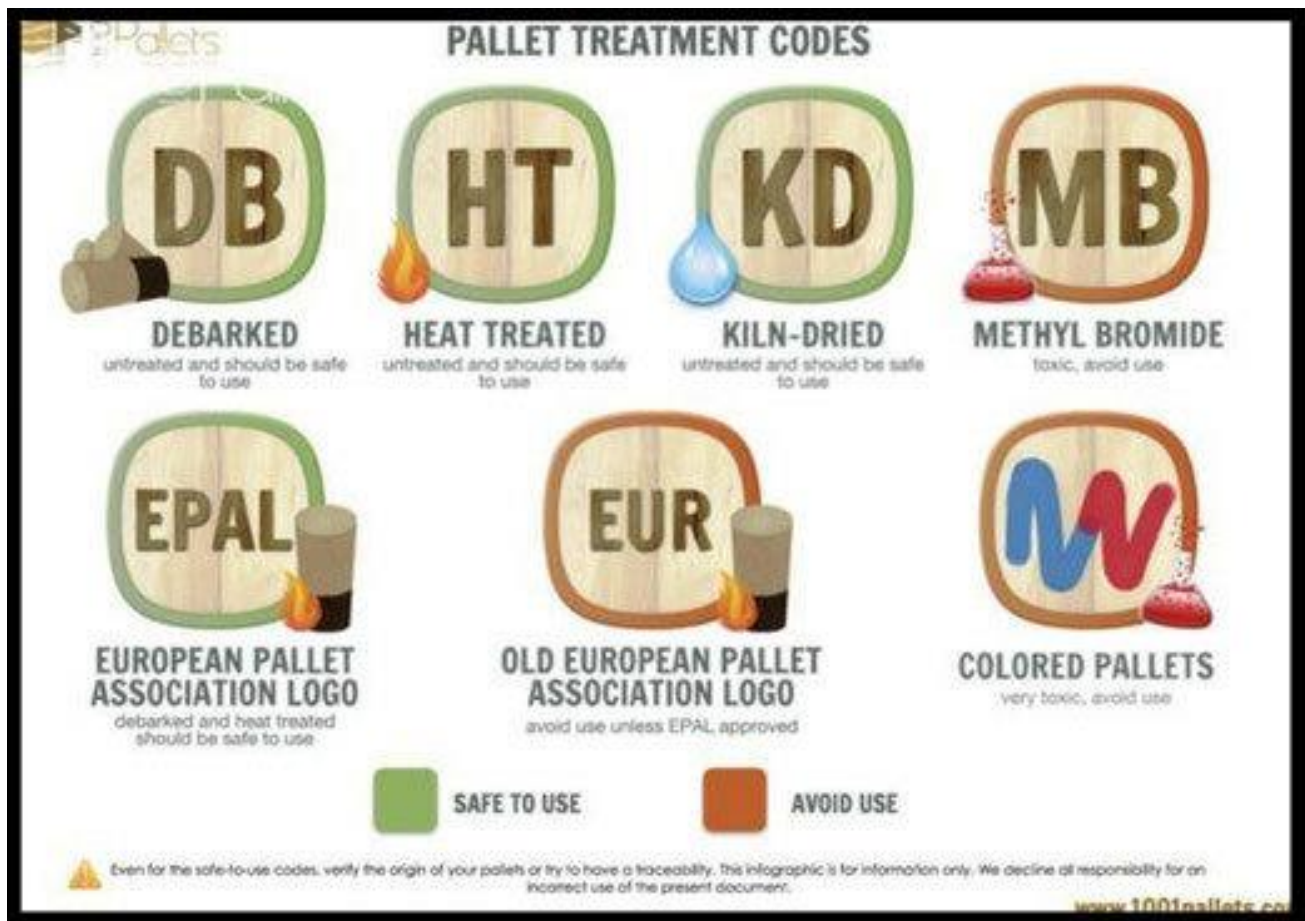
## How to proceed

- ✓ The nails are removed by hammering on the tips (upside down), tearing off the pincers. If the nail breaks in the wood, use the nail punch;
- ✓ The nails are kept in a bin intended for this purpose (metal recycling);

- ✓ The blocks are sorted according to their materials: solid wood vs reconstituted wood;
- ✓ All deck boards must be free of metal at the end of the dismantling process.

### III. Wood preparation for storage

- ✓ Pallets are usually made of second choice deck boards;
- ✓ Sort according to the thickness and width of deck boards, or even according to his length, if it is a non-standard pallet;
- ✓ Some pallets are made of treated / colored wood -> restricted use (see Pallet Treatment Codes Pictogram).



## IV. Planning Wood

Machines use in the workshop



The use of these machines should be always done in a secure zone, on the ground delimited by an exclusion zone.

A vacuum cleaner can work during the process to clean as much wood dust as possible

Mandatory Personal Protective Equipment (PPE):



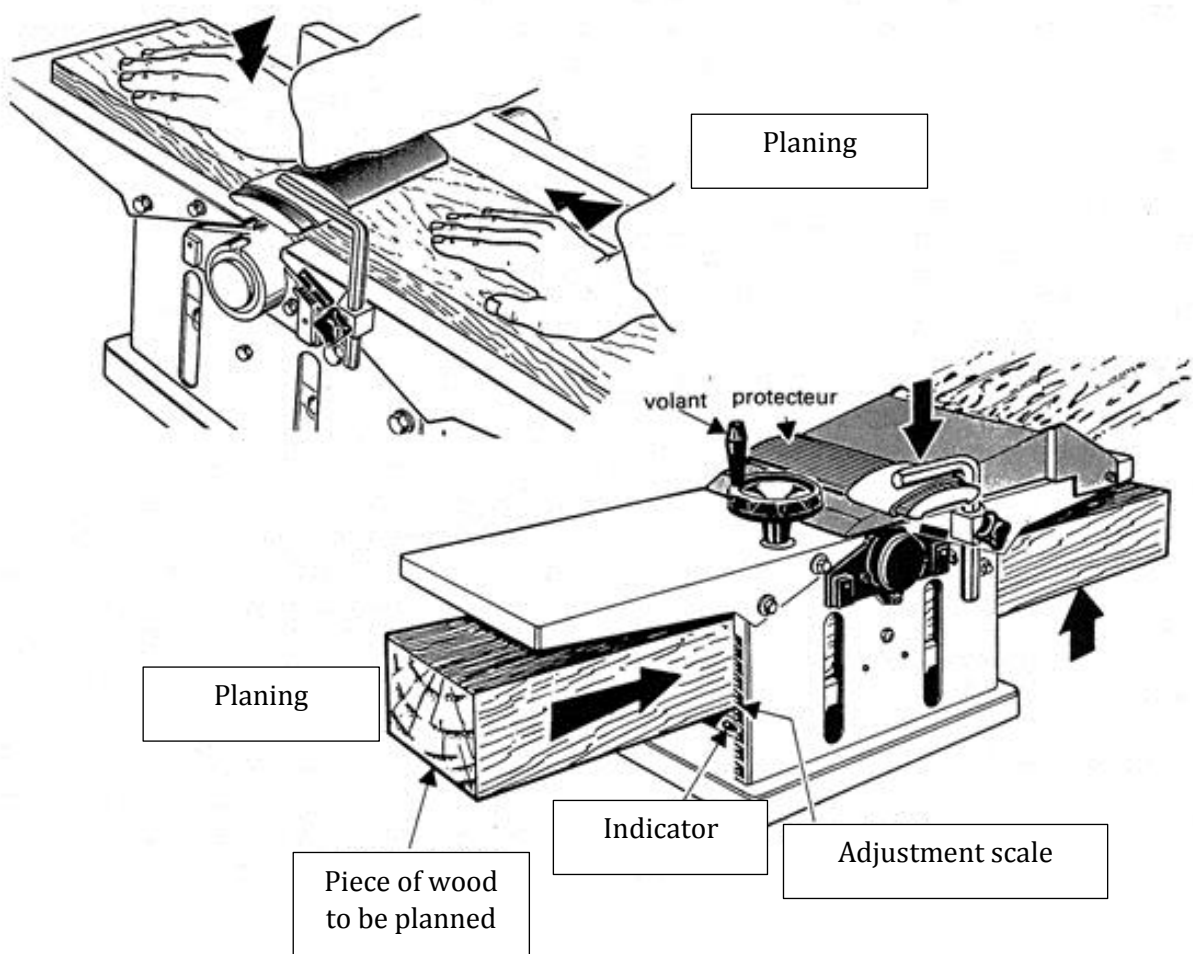
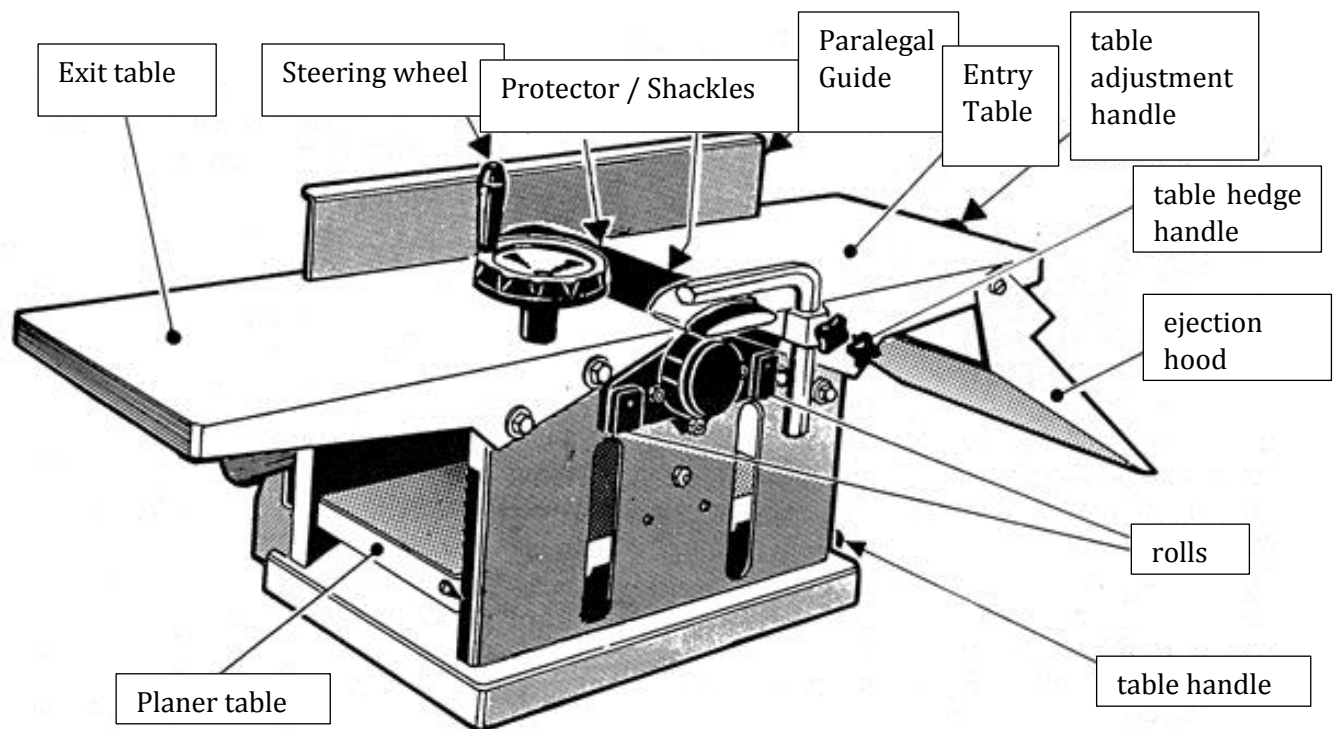
\*Heavy cotton clothing, metal and wood projection hazard

If you want to give a plain finish to the boards, they should be placed in a planer / planer:





## Anatomy and Use



## Sawing wood

Boards should be placed by their length and determined by the plans for the furniture (in term of creation or future use):

Several types of saws can be used:

- ✓ The planer, to saw the woods to length



- ✓ Radial saw, for sawing wood at an angle



- ✓ Circular saw, for sawing small lengths of wood (can be used with a guide, can be tilted for some cuts)



- ✓ Multi-function tool, for special cutouts



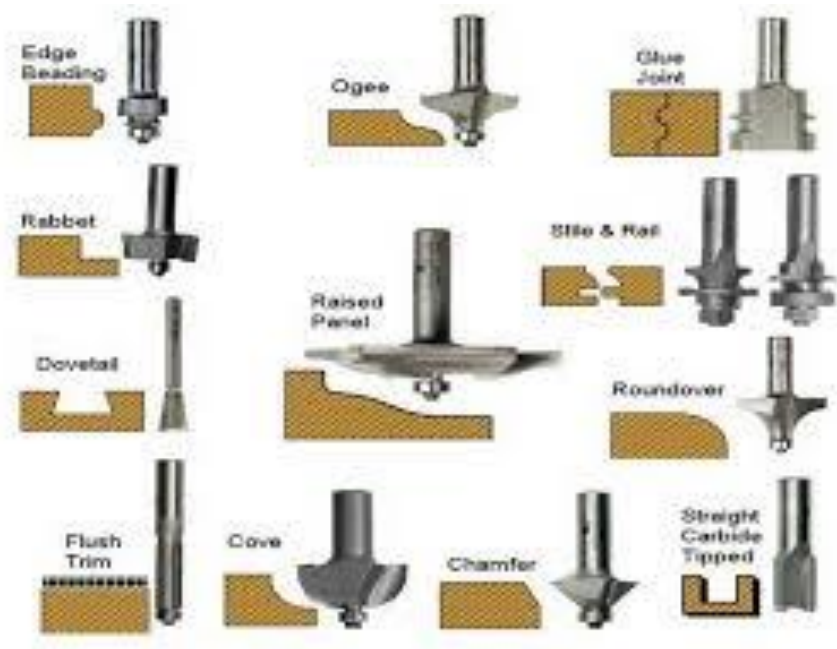
- ✓ Jigsaw (pendulum), for special cuts



## Other machines used

1) The router allows the realization of assemblies, moldings, grooves, rabbets, mortises, tenons, plates, profiles against profiles, incrustations, complementary milling, etc. Associated with various guides or templates, the router is a very versatile tool.





2) Sanders, can eliminate splinters and provide an impeccable finish to reclaimed wood



Eccentric sander (or orbital)



Belt sander

**G40**



Examples of sander paper

## V. Sorting and recycling

During the dismantling, cutting, planing and sanding, waste is collected:

The nails are put in bins, for recycling (foundry)



The wood splinters are sorted and distributed for later use. Either heating, incineration or for reuse in other applications. Sawdust could be recovered for dry toilets or to litter boxes for horses.

## Pallet course

Arrival of pallets (the safety net has been removed for the purpose of the photo)





Pre-Storage



Sorting and storage



Sanding boards (raw boards effect)





### Some achievements















