



SAFETY TRAINING LEAFLET 18 HAND TOOLS

Doc 23.18/18

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HAND TOOLS

Prepared by Safety Advisory Council

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Note: this Safety Training Leaflet is taken from Leaflet 17: HAND TOOLS in Doc 23/08 Safety Training of Employees. The leaflet has been put into a new format and revised.

1 Introduction

1.1 Safety leaflets

Safety training leaflets summarise the basic operational safety knowledge which needs to be known by employees working in the gas industry.

Refer to EIGA Doc 23 *Safety Training of Employees* for the various combinations of leaflets which define the scope of safety training for a variety of specific jobs.

Each leaflet addresses a specific topic as identified in the title.

1.2 Comprehension tests

There is a comprehension test for each leaflet, included in **Appendix 1**.

Each test comprises several questions. To pass the test it is suggested that the employee should score 75% at the first attempt. Incorrect answers should be discussed to confirm understanding.

Appendix 2 includes the list of correct answers.

2 Hand tools

2.1 Use of tools

Misuse of tools or using defective tools can result in severe injuries. Also, using inappropriate tools might lead to damaged tools or equipment.

2.1.1 Use the Right Tool for the Job

Tools provided should be assessed to ensure that they are fit for the purpose, the environment in which they are to be used and are in good working conditions. For example:

Do not use makeshift tools, such as using a spanner to hammer, pliers instead of the correct spanner, etc.

- Use the correctly sized spanner (preferably a ring, box or socket spanner) for nuts and bolts.
- Never use pliers on a nut.
- An adjustable spanner should only be used as last resort.

2.2 Maintenance and routine checks

If you let tools deteriorate then they can break or lose grip when being used.

2.2.1 Keep Tools in Good Condition

- Visual checks, as well as preventive and corrective maintenance, shall be defined.
- Unsafe tools include spanners with worn, splayed or cracked jaws; screwdrivers with broken blades; hammers with loose heads or split handles; mushroomed heads on punches and chisels; files without handles; blunt cutting tools, etc.
- Tools which have deteriorated in this way must not be used until they have been repaired. If they cannot be repaired economically they must be scrapped.
- Cutting tools should be dressed frequently to keep them sharp, cover exposed edges wherever possible.

2.3 Hazards of incorrect use

- If you do not use a tool correctly you run a greater risk of being injured.
- Selection and use of tools must be such that the worker will not lose his balance or be struck by the tool if something goes wrong.
- Knives are very frequently the cause of injuries. To prevent injury, the cutting stroke should always be away from the body and the hand which is holding or steadying the work should not be in the path of the blade.
- A screwdriver should not be applied to an object held in the hand - place the work on the bench.
- A spanner should be pulled towards you - not pushed. If it is pushed and the nut suddenly breaks loose, then you can fall forward.
- Do not attempt to get extra leverage on a spanner or pipe wrench by slipping a length of pipe over the handle of the tool. This can strain the tool to breaking point. Use torque adjustable wrenches.
- If a spanner is slightly too large, do not make a fit by using packing, such as a washer. Get the correct size of spanner, or if one is not available use an adjustable spanner.
- Iron or steel hand tools can be dangerous sources of ignition around flammable substances.
- Insulated tools must be used where there is a possibility of electrical hazards.

2.4 Storage and carriage of tools

Unless you carry or store tools properly they can injure yourself or others.

2.4.1 Carry Tools Safely

- Never carry tools in such a way that might interfere with using both hands freely on a ladder.
- A strong bag, bucket or similar closed container should be used to hoist tools from the ground to the job and they should be returned in the same manner, not brought down by hand, carried in the pockets, or dropped to the ground.
- Chisels, screwdrivers and sharp tools should never be carried in pockets. They should be carried in a toolbox, in a carrying belt (sharp or pointed end down); in a pocket tool pouch.
- Tools should be handed from one workman to another, never thrown. Edged or pointed tools should be handed with the handle towards the receiver or ideally in an adequate casing.

2.4.2 Keep Tools in a Safe Place

- Tools should not be left in elevated positions such as scaffolds or shelves or on top of cabinets as they can fall on persons below. In a context of working at height and co-activity conditions, collective protection against falling objects shall be considered.
- When tools are not in use they should be put in a toolbox. If left on the floor even for a few minutes, someone may trip over them.
- Sharp tools should not be left lying on a bench or in a drawer. When not in use they should be kept in a rack or special section of the toolbox, in such a way as to protect the user and prevent damage to the cutting edge.
- Make sure that sharp tools are never left hidden under paper, rags or other materials or mixed with other tools in the toolbox.

- It is advisable to slip plastic, metal or fibre guards over the sharp edges of tools before putting them away. This protects both you and the tool.

2.5 Clothing and PPE

Loose clothing can be snagged by tools, nails or working materials.

2.5.1 Use Personnel Protective Equipment

- Wear the required protective clothing - i.e. safety shoes, fire retardant clothes; gloves when using a cutting tool or where there is a risk of striking hands such as when using a hammer and chisel; hard hats when necessary.
- Safety glasses when working with striking tools where there is a risk of flying particles or pieces of the tool breaking off.

2.6 Machine tools

Machine tools in workshops need to be maintained and operated by qualified persons only and be equipped with appropriate guards.

Appendix 1 – Hand tools – Test Questions

Tick the correct answer (s) or write in the blank spaces as requested.

1. Tick correct actions to be taken with hand tools.
A. Use the right tool for the job
B. Keep tools in good condition
C. Carry tools safely
D. Keep tools in a safe place
2. Tick two examples of misusing tools:
A. Use pliers on a nut
B. Use spanner to hammer a bolt
C. Use adjustable spanner on a nut
D. Screw a lock on a door with a screwdriver
3. Tick two examples of unsafe tools.
A. Spanners with cracked jaws
B. Hacksaws with sharp blade
C. Hammers with loose heads.
D. Hammers with wooden handles
4. Tick two examples of unsafe ways of working with tools.
A. The object to be screwed should be held in the hand
B. Cutting stroke with a knife away from the body
C. Spanner should be pulled towards you
D. Hand holding the work in the path of the blade
5. Do not attempt to get extra leverage on a spanner or pipe wrench by slipping a length of pipe over the handle of the tool. This can strain the tool to breaking point. Use torque adjustable wrenches.
A. True
B. False
6. Chisels, screwdrivers and sharp tools should be carried in the pockets always pointing down to prevent injuries
A. True
B. False
7. Tick two examples of unsafe ways of keeping tools
A. Sharp tools are better left hidden under paper
B. Keep tools in the workshop in a rack
C. Tools left in elevated position to better detect them
D. Slip plastic guards over the sharp edges of tools
8. When tools are not in use they should be put in a toolbox. If left on the floor even for a few minute, someone may trip over them:
A. True
B. False

Appendix 2 – Hand tools – Test Answers

1. A, B, C and D
2. A and B
3. A and C
4. A and D
5. A
6. B
7. A and C
8. A