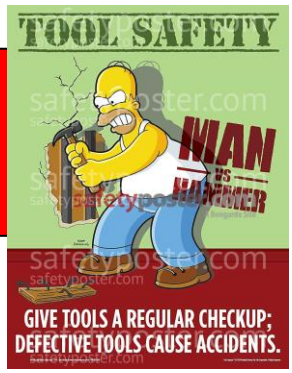
TOOLBOX TALK
NO.39

Portable Electric Tools



Electrical tools face harsh conditions on site – when misused they get damaged and become dangerous.

Electric shock is a major hazard; the severity of the shock will depend on the level of electric current and the duration of contact. A low level current can result in an unpleasant tingle but can still be enough to cause loss of balance or fall. About 10 milliamps can cause muscular tension, which causes anything being grasped difficult to let go. High levels of electric shock of 50 milliamps or above for a period of one second can cause fibrillation of the heart muscles, which can be lethal. Electric shock will also cause burning of the skin at the points of contact. Other hazards include fire and slips, trips and falls from trailing cables.

- Only use equipment that you have been trained or instructed on.
- Before use, check the tool is an approved type and suitable for the work being carried out, if in doubt ask your supervisor.
- Check condition of the power tool for damage prior to starting work.
- Check electrical cables and plugs for damage, on a daily basis.
- When a fuse blows or circuit breaker trips always contact someone authorised to discover the cause, promptly, before reinstating the power supply.
- Ensure power tools are switched off before cleaning or making adjustments.
- Extension cables should be routed so as not to cause tripping or similar hazards.

Do's and Don'ts

• Keep all electrical equipment clean, dry and in good order.

• Always disconnect power tools when not in use.

• Don't attempt to repair tools unless authorised and qualified to do so.

• Don't use damaged power tools.

• Don't use blunt or damaged "bits" or accessories.

• Don't stretch cables or trail them across passageways so causing a tripping hazard.

• Only 110-volt portable equipment (or less) is permitted on site work.

• Don't pull equipment by the cable, the connections may work loose and increase the electrical hazard.

Before-use Checks

- Make sure the casing isn't damaged, if it do not use it.
- Make sure that all cables, plugs or connectors are sound and not damaged.
- Before using a portable electric tool check to see it is properly earthed, unless it is an approved type that does not require earthing.
- Use tools on correct power supply as instructed on the makers label. Only 110v tools are permitted on site.
- Check for current PAT test sticker, if the sticker is out of date, report it to your supervisor. PAT testing is required every 3 months.
- Ensure that the cable is long enough to reach your workface – to do stretch the cable.

Using Portable Electric Tools

- Portable electrical tools should only be used for their intended purpose.
- Ensure switches are working correctly before connecting to the power supply.
- Wear appropriate eye protection for the task as noted in your risk assessment.
- Disconnect tools when not in use or making adjustments.
- Electrical power tools should be regularly inspected and maintained by a competent electrician.

Hazards

- If possible, keep power cables off the floor. They may become damaged or cause someone to trip or trail through water.
- Electrical tools often present a noise hazard – wear hearing protection as necessary or noted in your risk assessment.
- Avoid standing on a damp or wet surface when using electrical equipment. Keep equipment clean and dry.
- Do not use blunt, worn, or damaged bits and accessories.
- Portable electrical tools which have become wet should be allowed to fully dry out and then be inspected by a competent person before use.
- Some hand held tools can cause hand arm vibration – ensure that the method statement has assessed this.
- Do not carry electrical tools around by the power lead.

Questions:

What are the main hazards of using power tools?

When are you allowed to use power tools?

What is the maximum voltage for on-site power tools?

Before cleaning or adjusting power tools what should you do first?

It is ok to leave power tools switched on when not in use or unattended?

What should you do if the electrical power trips out?

Remember: The potential to cause harm can be substantially reduced if a system of regular checks, inspection and maintenance is put into practice.