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## **ELECTRICITY**

### General

1. Unlike most other hazards on site which can be seen, felt or heard, there is no advanced warning of danger from electricity – and it can kill.
2. It must be clearly understood that the installation, maintenance and repair of electrical services and equipment must only be done by a competent qualified electrician.

### Power Tools

1. Do not bring your own tools or extension leads onto site.
2. Use only tools supplied, which should be in good condition and have been inspected on a regular basis.
3. A planned maintenance system should be in place for all power tools and records of all inspections and tests should be available to all employees.
4. Before using a power tool, check for defective cables, plugs and sockets.
5. When using a power tool, disconnect it from the supply before making adjustments and when it is not in use.
6. Fuses may not be 'up-rated'.
7. Power tools must not be plugged into lighting circuits.



8. Tools must not be carried, lifted or lowered by the cable.
9. Stay out of the wet when using an electric tool.
10. Never use defective tools or equipment – report them at once. Do not repair equipment with insulation tape.

### Fixed Electrical Systems

1. All fixed electrical systems should be inspected, tested and maintained regularly.
2. All fixed electrical systems and equipment should be correctly earthed unless it is of an approved double or fully insulated type.
3. Electrical systems should be correctly installed and appropriate steps should be taken to ensure that circuits are not overloaded.



**Table 1** Suggested initial maintenance intervals

Type of business		User checks	Formal visual inspection	Combined inspection and test
Equipment hire		N/A	Before issue/after return	Before issue
Battery operated equipment (less than 40 V)		No	No	No
Extra low voltage (less than 50 V ac), telephone equipment, low-voltage desk lights		No	No	No
Construction	110V equipment	Yes, weekly	Yes, monthly	Yes, before first use on site then 3-monthly
	230V equipment	Yes, daily/every shift	Yes, weekly	Yes, before first use on site then monthly
	Fixed RCDs	Yes, daily/every shift	Yes, weekly	Yes, before first use on site, then 3-monthly (portable RCDs – monthly)
	Equipment site offices	Yes, monthly	Yes, 6-monthly	Yes, before first use on site then yearly
Heavy industrial/high risk of equipment damage (not construction)		Yes, daily	Yes, weekly	Yes, 6–12 months
Light industrial		Yes	Yes, before initial use then 6-monthly	Yes, 6–12 months
Office information technology rarely moved, eg desktop computers, photocopiers, fax machines		No	Yes, 2–4 years	No if double insulated, otherwise up to 5 years
Double insulated <input type="checkbox"/> (Class II) equipment moved occasionally ( <b>not</b> hand-held), eg fans, table lamps		No	2–4 years	No
Hand-held, double insulated <input checked="" type="checkbox"/> (Class II) equipment, eg some floor cleaners, some kitchen equipment		Yes	Yes, 6 months – 1 year	No
Earthed (Class I) equipment, eg electric kettles, some floor cleaners		Yes	Yes, 6 months – 1 year	Yes, 1–2 years
Cables, leads and plugs connected to Class I equipment, extension leads and battery charging equipment		Yes	Yes, 6 months – 4 years depending on type of equipment it is connected to	Yes, 1–5 years depending on the equipment it is connected to

Chart taken from HSE Maintaining portable electrical equipment which can be downloaded here. <https://www.hse.gov.uk/pubns/books/hsg107.htm>