CDX Using a lead light

Objective:

Demonstrate the correct method of operating a lead light.

This activity sheet contains:

- Step-by-step instructions for completing the workshop procedure.

Personal safety:

Whenever you perform a task in the workshop you must use personal protective clothing and equipment that is appropriate for the task and which conforms to your local safety regulations and policies. Among other items, this may include:

- Work clothing - such as coveralls and steel-capped footwear.
- Eye protection - such as safety glasses and face masks.
- Ear protection - such as earmuffs and earplugs.
- Hand protection – such as rubber gloves and barrier cream.
- Respiratory equipment – such as face masks and valved respirators.

If you are not certain what is appropriate or required, ask your supervisor.

Safety check:

- Do not stand on wet floors or in puddles when using electrical equipment.
- Before connecting the light to the power supply check the power cord for splits or chafing. If there are any exposed wires, the cord will need to be replaced. Refer this to your supervisor.
- Always disconnect the power supply before plugging or unplugging an electrical connection.
- Before replacing blown or faulty bulbs make sure you disconnect the lead light from its power supply.
- Make sure that you understand and observe all legislative and personal safety procedures when carrying out the following tasks. If you are unsure of what these are, ask your supervisor.

Points to note:

- Lead lights, also known as drop lights or utility lights, are very useful tools. The light they produce can make locating components and faults easier and more accurate.
- Lead lights are available with either fluorescent tubes or incandescent bulbs.
- The type that uses fluorescent tubes produces white light and little heat. The tube is protected in a shockproof casing that contains a light shield.
- There will usually be attaching hooks located at either end of the case to allow the light to be suspended from a convenient location.
- 20% of the power fluorescent tubes consume is converted to white light.
- The fluorescent light normally receives power from a transformer.
- Incandescent lead lights are cheaper than the fluorescent type but they are not as shock resistant or as safe. A wire cage protects the bulb and if it breaks the exposed filament connections can pass electric current to anything that touches them. About 5% of the power they consume is converted to yellow/white light. The rest is wasted as heat, so they can become a hazard after long periods of use.
- The power for the bulb usually comes from the domestic supply, however there are some models that operate at 12- or 24-volts.

1. Connect the lamp

Plug the lead lamp into a socket near your work area. Make sure the lamp cord is placed where nobody can trip over it.

2. Secure the lamp

Secure the lamp near your working area. Make sure it's positioned so your hands don't block the light while you're working.

The lamp should also be kept away from your face and head. The lights are designed to be handled safely even after long periods of work.

3. Replace bulbs

If the bulb burns out refer to the light manufacturer's instruction book for replacement details. The bulbs come in various mounting configurations.

4. Unplug and put away

When finished using the lamp, unplug it and put it away in a safe place.