Technology: Risk Assessment Title: **Powered Fret Saw Machine** OCTOBER2015

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| **Identify the Hazards** | **Who is at Risk?** | **What is the Harm?** | **Activity Taking Place** | **Control Measures Required** | **Additional Information** |
| Employees and learners should be made aware of the following hazards.  1. Hand or Finger Contact  2. Bench Detachment  3. Inhalation of Dust  4. Contact from  Inadvertent Starting  5. Unauthorised Use  6. Impact From  Ejected Parts  7. Hand, Hair or Clothing Entanglement  8. Electric Shock | Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students | **Hands or fingers, which can come into contact with the saw blade.**  **The powered fret saw machine, which can become detached from the bench.**  **Wood dust, which can be inhaled.**  **Inadvertent starting of the machine.**  **Unauthorised use.**  **Broken parts or blades from cutting operations being violently ejected during use.**  **Entanglement can lead to choking, strangulation or scalping.**  **Electric shock from mains supply installations can lead to death.** | Cutting material  Cutting material  Cutting material  Cutting material  Cutting material  Cutting material  Cutting material  Cutting material | Blades should be guarded at all times. The hold-down foot should be used at all times if available.  The saw should be securely fixed to the bench to remove the risk of movement. Alternatively, if on a floor mounted stand, the stand should be securely fixed. The height of the machine should also be set for comfortable working as possible.  If an external LEV is available it should be used when cutting woods or plastics. If the model is supplied with a small blower nozzle to clear debris it must be pointed away from the user at all times. It is for the school to decide whether the amount of material cut and time taken requires a face mask to be worn.  The machine should be provided with a means of electrical isolation using a fused isolating switch on or adjacent to the machine, and that it is controlled by a starter incorporating overload protection and no-volt release.  Also with a conveniently positioned and accessible, emergency stop switch (which could be the normal “off” switch) or other suitable control device that can quickly stop the machine in an emergency.  The machine should be unplugged or isolated whenever not in use or unsupervised.  Suitable eye protection PPE should be worn at all times to remove the risk to eyes should a blade or material part be ejected from the machine.  Blades should be sharp, and should be of the correct pattern and distortion-free.  Long hair should be tied back and protected from entanglement. Loose clothing should be avoided. No jewellery should be worn.  The machine should be included in a planned maintenance programme that should include electrical safety tests. | Reference BS 4163:2014  **This is a generic Risk Assessment that must be modified to suit your place of work**. The Risk Assessment modifications should take into consideration the activity, age/stage/pupil ability, department/working environment and the experience of the teacher in charge. If Control Measures Required as described are implemented the risk is reduced to an acceptable level for mainstream students.  Manufacturer’s instruction guide should be followed and kept within the department for future reference.  Plug in models do not allow the Teacher/Technician to switch the machine off in an emergency and can allow unauthorised use. Best practice is a hardwired model.  Suitable eye protection conforming to BS EN 166:2002 1B should be used.  Blunt or distorted blades can break in use. They should be removed and disposed of immediately.  The risk of electric shock is reduced by good maintenance and the use of double insulated machines. |
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