



Victorian Certificate of Education 2008

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER

Letter

Figures

Words

VCE VET FURNISHING (CABINET MAKING)

Written examination

Thursday 13 November 2008

Reading time: 9.00 am to 9.15 am (15 minutes)

Writing time: 9.15 am to 10.45 am (1 hour 30 minutes)

QUESTION AND ANSWER BOOK

Structure of book

<i>Section</i>	<i>Number of questions</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
A	20	20	20
B	8	8	50
C	5	5	30
			Total 100

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners, rulers and one scientific calculator.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.

Materials supplied

- Question and answer book of 16 pages. There is a detachable insert for Section C in the centrefold.
- Answer sheet for multiple-choice questions.

Instructions

- Write your **student number** in the space provided above on this page.
- Check that your **name** and **student number** as printed on your answer sheet for multiple-choice questions are correct, **and** sign your name in the space provided to verify this.
- All written responses must be in English.

At the end of the examination

- Place the answer sheet for multiple-choice questions inside the front cover of this book.

Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.

SECTION A – Multiple-choice questions**Instructions for Section A**

Answer **all** questions in pencil on the answer sheet provided for multiple-choice questions.

Choose the response that is **correct** or that **best answers** the question.

A correct answer scores 1, an incorrect answer scores 0.

Marks will **not** be deducted for incorrect answers.

No marks will be given if more than one answer is completed for any question.

Question 1

Which hinge is most suitable for use on melamine kitchen doors?

- A. concealed hinge
- B. brass butt hinge
- C. soss hinge
- D. steel butt hinge

Question 2

When scaling up a 1:5 drawing, what is the length of a rail drawn 45 mm long?

- A. 450 mm
- B. 225 mm
- C. 900 mm
- D. 50 mm

Question 3

What is the name of the item of equipment that is used to cut curves in timber?

- A. circular saw
- B. tenon saw
- C. band saw
- D. rip saw

Question 4

What is the measure used to describe the maximum amount of time you should remain in a noisy environment?

- A. daily noise dose
- B. decibel level
- C. Australian standard for noise
- D. audiometric test

Question 5

It is only appropriate to share customer details when

- A. you think you need to.
- B. you want to impress your friends.
- C. you ask your co-workers if it is okay.
- D. you have the client's permission.

Question 6

How do you calculate the amount of sheet material required?

- A. length \times width \times number of pieces
- B. length \times width \times thickness
- C. width \times thickness \times number of pieces
- D. thickness \times length \times number of pieces

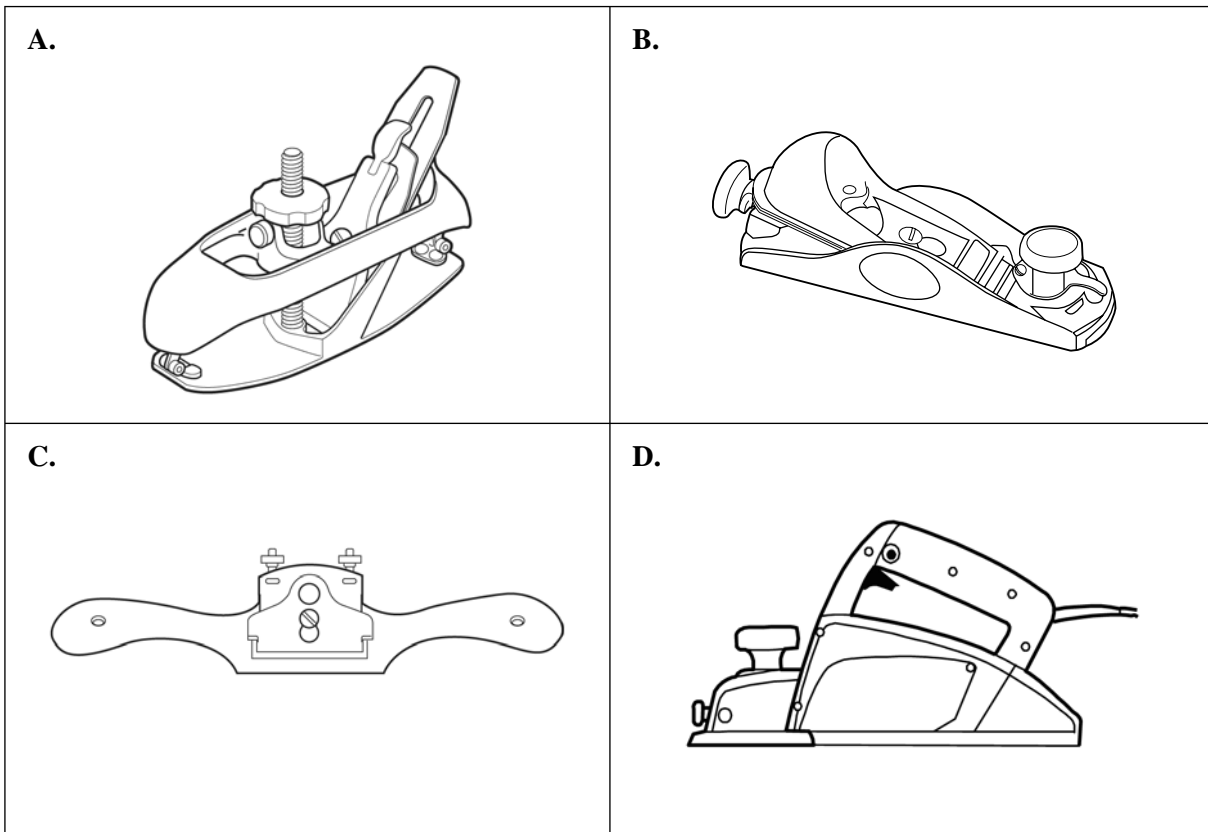
Question 7

What clamp would you use to hold a bedside table top in order to shape the edges?

- A. G clamp
- B. F clamp
- C. sash clamp
- D. spring clamp

Question 8

Which of the following would you use to plane **end grain**?



Question 9

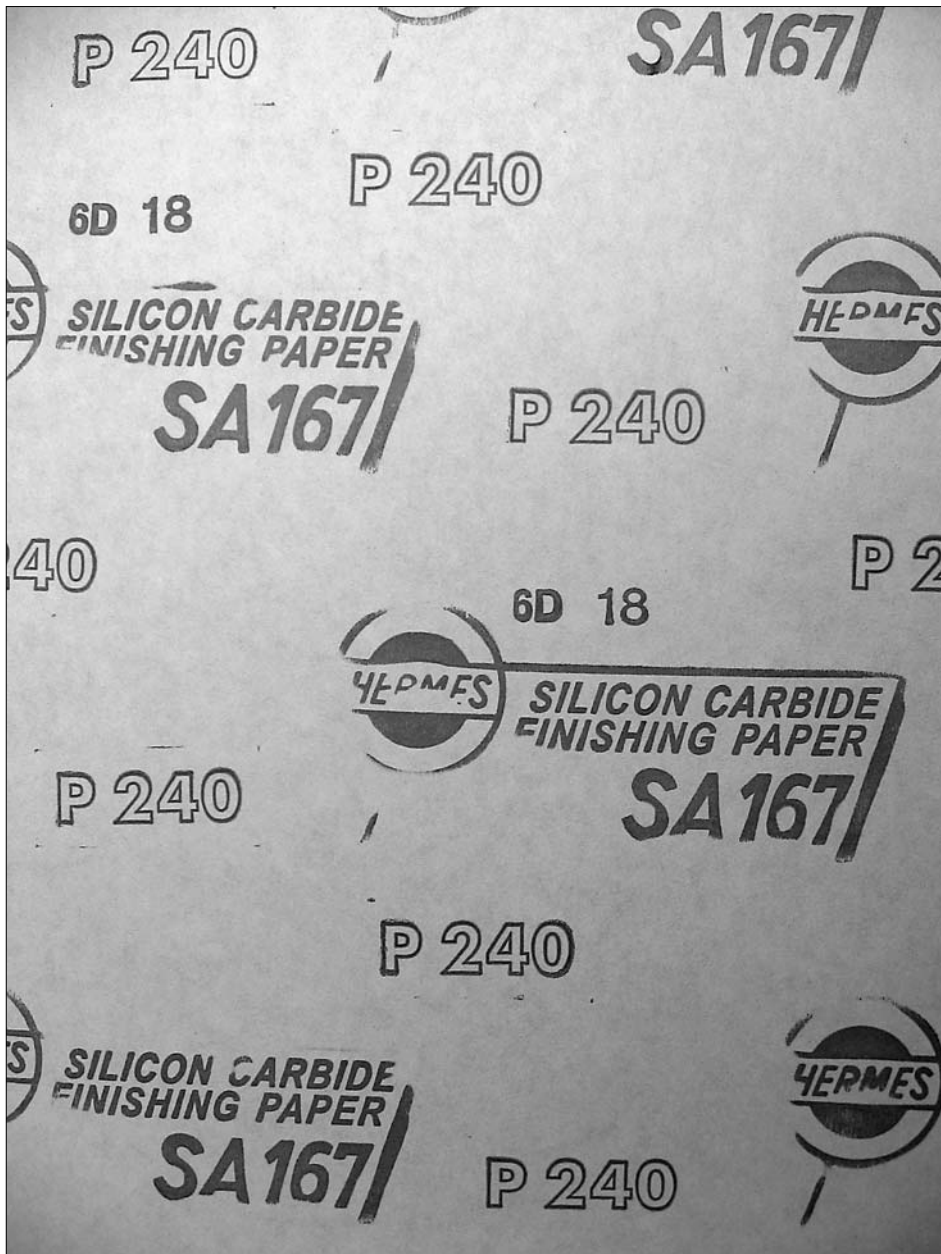
What type of drawer runner is shown above?

- A. timber runner
- B. single extension
- C. full extension
- D. under mount

Question 10

A traditional dining chair seat should

- A. slope forwards.
- B. be level.
- C. be made of timber.
- D. slope backwards.

Question 11

From this information on the back of a sheet of sand paper, what is the grit?

- A. 18
- B. 167
- C. 6
- D. 240

Question 12

Why should you read the manufacturer's documentation before installing a new drawer runner?

- A. to ensure there is not a cheaper supplier
- B. to ensure that it is suitable for the application
- C. to check the colour
- D. to check if it complies with the standards

Question 13

Which **tool set** is used to set out and prepare dowel joints for a leg and rail project?

- A. steel rule, marking gauge, pencil, dowel bit
- B. pen, try square, marking gauge, dowel bit
- C. dowel bit, pencil, try square, PVA glue
- D. marking gauge, dowel bit, pencil, scale drawing

Question 14

A door does not close correctly when fitted.

Which check was missed during the assembly process?

- A. The frame was not measured for 'diagonally square'.
- B. A check for 'twist and wind' was not carried out.
- C. The stiles and rails were not 'drilled' from the selected face.
- D. The rails were not 'checked for length and parallel' before assembly.

Question 15

A new power tool is purchased for use in the workplace.

You should

- A. use it based on your previous experience with power tools.
- B. consult the manufacturer's specifications and operating instructions before use.
- C. check with another tradesperson in the business before you use it.
- D. use another tool until the employer returns to the workplace to give advice.

Question 16

How many square metres of veneered ash particle board are required for two cabinets if each cabinet has four 732 mm × 418 mm doors?

- A. 1.224 m²
- B. 2.448 m²
- C. 0.306 m²
- D. 2.880 m²

Question 17

Building codes specify a low emission formaldehyde particle board.

You should

- A. use an imported product as it has a low emission factor.
- B. use Australian-made particle board to support the economy.
- C. consult a range of Material Safety Data Sheets prior to purchasing.
- D. use the cheapest particle board as it will have the lowest formaldehyde emission.

Question 18

When assembling production furniture using modular construction methods you should

- A. assemble components and fittings, as all parts have been prepared automatically by machine.
- B. use correct sequence, tools and hardware, assemble in a suitable work area using a quality checking process.
- C. assemble components quickly to guarantee a higher profit margin as modular furniture needs to be cheap.
- D. follow your co-workers instructions to eliminate problems with non-conforming parts associated with the construction process.

Question 19

A smoothing plane is used

- A. to prepare widening joints for table tops.
- B. for general cleaning up processes prior to sanding.
- C. to flatten one side of a board prior to using the thicknesser.
- D. to taper dining room table legs to the set out detail.

Question 20

What three personal protective equipment items should be worn when operating a portable router on medium density fibreboard?

- A. dust mask, hearing protection, safety glasses
- B. safety glasses, dust mask, safety boots
- C. hearing protection, eye protection, face mask
- D. eye protection, protective footwear, protective clothing

SECTION B – Short answer questions**Instructions for Section B**

Answer **all** questions in the spaces provided. Use explanatory diagrams, charts and sketches if you believe they will improve your answer.

A dining chair made using ash timber (see Figure 1) features a solid timber seat and will be sold by a local timber outlet.

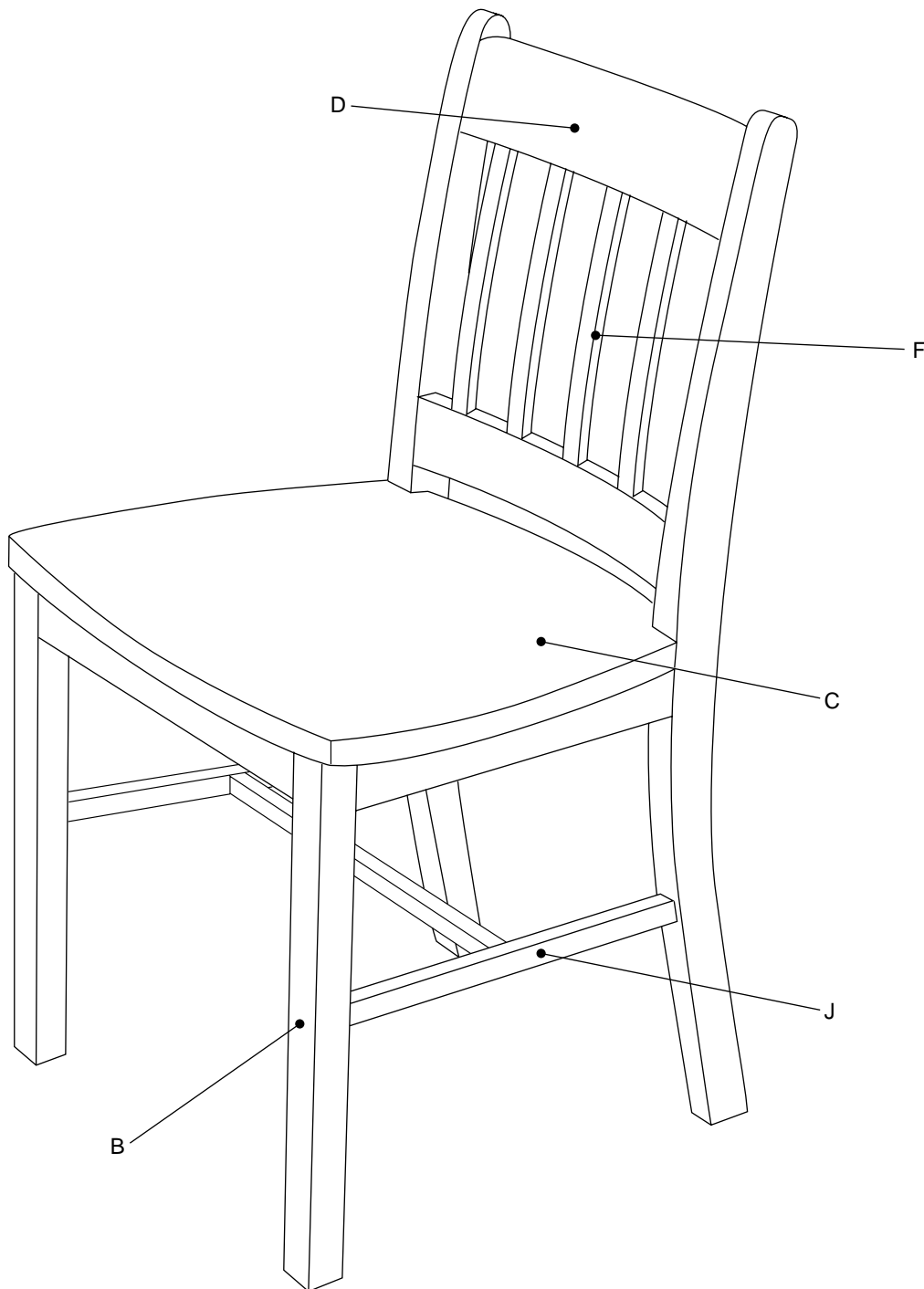


Figure 1. Dining chair in ash timber

Question 1

- a. Complete the cutting list below and insert the correct description for each part of the chair labelled in Figure 1.

Cutting list for the dining chair in ash timber					
item	description	no. of pieces	length (mm)	width (mm)	thickness (mm)
A	back leg		830	to pattern	34
B		2	430	40	40
C		1	480	470	20
D		1	340	60	42 (to pattern)
E	lower back rail	1		48	42 (to pattern)
F			380	35	12
G	front seat rail	1	370	55	20
H	back seat rail	1		55	20
I	side seat rail	2	370	55	20
J		2	440	22	16
K	centre stretcher rail		380	22	16

10 marks

- b. A sample set of six dining chairs and two carver chairs is to be constructed. How many back legs are required?

1 mark

- c. The back legs are cut as a matching pair (see Figure 2) and each board is face dressed to 34 mm thick.

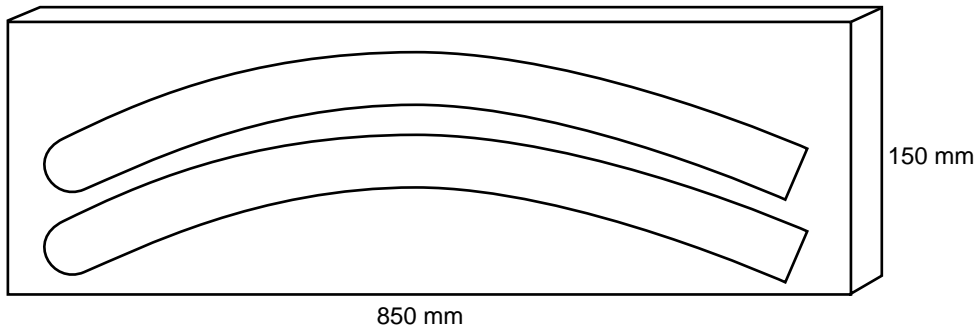


Figure 2. Back legs

Calculate the cost of the back legs in the sample set using sawn ash timber 150 mm × 38 mm section @ \$12.55 per lineal metre. **Show** working out below.

2 + 2 = 4 marks

- d. The seat is made from a section of sawn timber 1500 mm long × 175 mm wide and 25 mm thick. In the space provided

- i. set out the timber plan for the seat
- ii. provide an outline of the seat showing the finished shape
- iii. dimension the drawing (length and width)
- iv. show how the timber will be joined.

2 + 2 + 1 + 2 = 7 marks

- e. When components are marked out as in Figure 2 (back legs) the term used is 'nesting'. List two reasons why this is done.

i. _____

ii. _____

2 marks

- f. List two joining methods used by industry to construct a chair frame.

i. _____

ii. _____

2 marks

- g. Describe how you would attach the seat to the chair frame.

2 marks

Question 2

During your course of study you have constructed a chair.

- a. List four hand tools you used.
b. For what process were they used?

	hand tool	process used
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____

4 + 4 = 8 marks

Question 3

All materials used in industry require a Material Safety Data Sheet (MSDS). What important information is certain to appear in an MSDS describing Victorian ash timber?

2 marks

Question 4

a. Which portable power tool would be best suited to cutting the back leg of the chair?

1 mark

b. To do this safely, list two things you must do.

i. _____

ii. _____

2 marks

Question 5

Working drawings may be stored in a database on a computer. What method is often employed to ensure the latest drawing is used?

1 mark

Question 6

List an Australian Standard you have studied during your course.

1 mark

Question 7

List the two processes used when sharpening a chisel or hand plane.

i. _____

ii. _____

2 marks

Question 8

Four doors each 730 mm × 450 mm are to be prepared using ash-veneered MDF. You are to

- i.** cost the MDF @ \$19.75 per square metre
- ii.** cost the iron-on veneered edging @ \$0.60 per metre
- iii.** recommend a hinge type suitable for the doors that are self-closing
- iv.** calculate the number of hinges required and the total cost @ \$3.25 each
- v.** state the total cost of the doors if two hours @ \$30 per hour was the labour cost.

Use the space below to calculate each section.

Total cost \$_____

1 + 1 + 1 + 1 + 1 = 5 marks

**END OF SECTION B
TURN OVER**

SECTION C – Case study**Instructions for Section C**

Remove the insert from the centre of this book before answering this section.

Refer to Figures 1 and 2 in the insert when answering this section.

Answer **all** questions in the spaces provided.

Use explanatory diagrams, charts and sketches if you believe they will improve your answer.

Question 1

a. What three items of Personal Protective Equipment (PPE) should the operator be using?

i. _____

ii. _____

iii. _____

3 marks

b. The tag on the router is dated 12/4/06. What does this indicate?

1 mark

c. What are two maintenance requirements for the plane on the bench?

i. _____

ii. _____

2 marks

d. What tool should be used with the chisel on the bench?

1 mark

e. List three Occupational Health and Safety (OH&S) issues that you can identify.

i. _____

ii. _____

iii. _____

3 marks

Question 2

The document attached to the wall beside the drill press is a SOP (Figure 2). What is its purpose?

1 mark

Question 3

- a. What is the correct name for the clamp that is shown in Figure 1?

1 mark

- b. What two things should the cabinet maker check when cramping the table end leg and rail frame shown?

i. _____

ii. _____

2 marks

- c. Name the two parts of the frame cramped up in Figure 1.

i. _____

ii. _____

2 marks

- d. Develop a work plan for assembling the table leg and rail frame.

i. _____

ii. _____

iii. _____

iv. _____

4 marks

Question 4

- a. What does the symbol on the wall next to the drill press mean?

1 mark

- b. List the potential hazards in relation to the SOP in Figure 2.

i. _____

ii. _____

iii. _____

3 marks

Question 5

Complete the Job Safety Analysis (JSA) worksheet for the drilling operation shown in the insert.

Job Safety Analysis worksheet

Student Name: [Redacted] Date: [Redacted] Project Name: [Redacted]

Activity: _____

Activity List the tasks required to perform the activity in the sequence they are carried out.	Hazards Against each activity, list the hazards that could cause injury when the activity is performed.	Risk control measures List the control measures required to eliminate or minimise the risk of injury arising from the identified hazard.
1. Insert the drill and check work area	Accidental starting of machine. Damage to electrical system. Sharp edges and burrs on drill.	Isolate power to machine. Visually check all parts of machine before operation. Tighten chuck and ensure guard is in position.
2. Load the job		
3. Drill the hole		
4. Remove the work and clear the table for next operation		

I [Redacted] have read and understand the contents of this JSA. Signed [Redacted] Date [Redacted]
 Supervisor [Redacted] Date [Redacted]

6 marks

Insert for Section C

Please remove from the centre of this book during reading time.



Figure 1

SAFE OPERATING PROCEDURE

Operation/Plant: Drill Press
SOP005

Workplace:

SOP No:

Staff instruction – Ensure proper induction by your supervisor and review operating manual prior to operating or supervising students

Student instruction – Do not use machine unless a teacher has instructed you in its safe use and operation and has given permission

Safety Equipment



Safety glasses must be worn at all times in work areas.



Sturdy footwear must be worn at all times in work areas.



Rings and jewellery must not be worn.



Long and loose hair must be contained.



Close fitting/protective clothing must be worn.



Gloves must not be worn when using this machine.

Potential Hazards

1. Hair/clothing entanglement – rotating spindle/drill
2. Eye injuries
3. Flying swarf/chips
4. Sharp edges and burrs

Pre Operational Checks

1. Check workspace and walkways to ensure no slip-hazards are present.
2. Check that the drill chuck guard is in position.
3. Ensure the chuck key (if used) has been removed from the drill chuck.
4. Locate and ensure you are familiar with the operation of the ON/OFF starter and Emergency stop (if fitted).
5. Follow correct clamping procedures to ensure work is secure.
6. If the job obstructs the walkway erect a barricade.
7. Adjust spindle speed to suit drill or cutter diameter.
8. Faulty equipment must not be used. Immediately report suspect equipment.

Operational Checks

1. Never leave the Drill Press while it is running.
2. Before making adjustments or before cleaning swarf accumulations switch off and bring the machine to a complete standstill.
3. Feed downwards at a sufficient rate to keep the drill cutting.
4. Feed with care as the drill breaks through the underside of the work.
5. Use a safe working posture (beware of hair catching).

Housekeeping

1. Switch off the machine.
2. Leave the machine in a safe, clean and tidy state.

Figure 2. Safe operating procedure

END OF INSERT FOR SECTION C