



NZQA accredited and registered provider

Unit Standard 30475

PRACTICE PAPER ONLY

Test Paper One / Time allowed 90 mins

To be completed by the student

Student Name _____ Date __ / __ /2021

School/Provider _____

To be completed by the School Invigilator/Coordinator/Tutor

I confirm that this assessment was completed by the student named above as a closed book exercise under exam conditions

Invigilator Name _____

Invigilator Sign _____

Assessed By _____

Date __ / __ / 2021

Assessor's
Stamp

Assessors Note: Materials relate to unit standard 21670-30475

PLEASE MAKE SURE TO READ AND SIGN THIS SECTION

ASSESSMENT INSTRUCTIONS

- Before starting this assessment you should have achieved a mark of at least 80% for your workbook.
- Use a black or blue ball point pen. (do not use pencil)
- Write your full name on the cover page.
- This is a closed book assessment, so you cannot bring any reference material in, or seek help from anyone else.
- You need to answer all the questions.
- Read the questions carefully, and give detailed answers when asked to.
- You must complete the assessment under exam conditions.
- To achieve the unit standard you must show competency for each outcome.

Complete the following by circling Yes or No as appropriate:

Are you ready to be assessed? **Yes No**

Have the assessment instructions these been explained to you? **Yes No**

Do you understand the assessment instructions? **Yes No**

Have you all the materials/resources that you need for this assessment? **Yes No**

Please sign to acknowledge that you have read these instructions and are ready to be assessed.

Student Signature: _____ Date: _____

ELEMENT ONE

Demonstrate knowledge of metals and composite materials commonly used in the motor industry.

- 1. Complete the table by providing an automotive use for each of the following non-ferrous metals and a reason why the metal is used.**

	USE	REASON
Aluminium		
Copper		
Lead		
Solder		
Brass		
Bronze		
Chromium		

2. Complete the table by providing an automotive use for each of the following ferrous metals and a reason why the metal is used.

	USE	REASON
Mild steel		
High tensile steel		
Spring steel		
Stainless steel		
Cast iron		
Medium carbon steel		
High carbon steel		

3. Complete the table by providing an automotive use for each of the following plastics.

	USE
ABS	
PE - Polyethylene	
TPUR	
Acrylic	
Polyamide or Nylon	
Polystyrene (PS)	

4. Complete the table for each of the following heat treatments and a reason why it is carried out and brief explanation of how it is carried out.

	Why is it carried out?	How is it carried out?
Hardening		
Case hardening		
Tempering		
Annealing		
Normalising		

ELEMENT TWO

Demonstrate knowledge of assembling and securing components.

1. Provide a brief description of each of the following methods of securing components:

Bonding _____








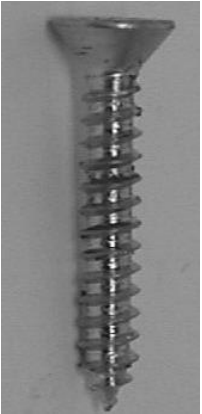
Mechanical _____

Welding _____

2. Complete the table by providing an automotive use for each of the following fasteners.

	USE
Cable ties	
Clamps	
Double sided tape	
Lockwire	
Studs	

3. Complete the table by identifying the fasteners.

4. What are pop rivets and describe how they are used.

What is the main advantage of using this type of fastening system?

5. What are mechanical locking devices?

6. What are chemical locking devices?

ELEMENT THREE

Demonstrate knowledge of drilling holes in materials.

1. List two types of drilling tools that can be used to drill a hole.

1 _____

2 _____

2. List three factors to be considered before drilling a hole in a component.

1 _____

2 _____

3 _____

3. List four factors to be considered when selecting a twist drill.

1 _____

2 _____

3 _____

4 _____

4. Explain why the trailing edge of the twist drill lip must be lower than the leading edge.

5. List three reasons why cutting fluid when drilling.

1 _____

2 _____

3 _____

6. Explain why it is important to refer to the manufacturer's charts when drilling a hole for tapping.

7. Explain why it is important to check the twist drill is correctly sharpened before use.

8. Describe the procedure involved when sharpening a twist drill.

9. List three outcomes that should be avoided when drilling a hole.

1

2

3

- 10. State a safety precaution that must be observed when using drilling equipment to protect your personal safety.**

- 11. State a safety precaution that must be observed when using drilling equipment to protect the safety of others.**

- 12. State a safety precaution that must be observed when using drilling equipment to protect tools and equipment.**

ELEMENT FOUR

Demonstrate knowledge of using hand threading tools used to repair a component.

1. Complete the table by providing a function for each of the following hand threading tools.

	Function
Taps	
Dies	
Thread files	
Sleeve thread inserts	

2. Outline the procedure involved when cutting a thread in a blind hole using taps.

3. What is a thread gauge used for?

4. Outline the procedure involved when installing a thread insert.



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