



Literacy and numeracy profile:

# Collision Repair Technician

**This profile identifies the literacy and numeracy tasks and skills used by collision repair apprentices and technicians. These tasks and skills involve reading, writing, speaking and listening, numeracy, critical thinking and the use of information and communication technology.**

## Reading tasks

*"Read" implies that the person reads and understands.*

### Read signs and short texts

- Part numbers
- Part descriptions
- Safety signs
- Vehicle identification numbers (VIN)
- Chassis numbers.

### Read charts, graphs and tables

- Chassis straightening measurement charts
- Tables and charts of specifications from vehicle manufacturers.

### Read forms on job

- Time sheets
- Job sheets (include instructions about faults or work required on vehicle)
- Repair checklists
- Quality checklists.

### Read notices and memos

- Work schedule on whiteboard in workshop
- Notices on notice board (e.g. staff meeting, social activity)
- Health and safety information.

### Read instructions

- Body repair manuals
- Specific repair instructions provided by vehicle manufacturers
- Container labels and product mixing instructions
- Material Safety Data Sheets (MSDS)
- Health and Safety and Emergency procedures.

### Read training materials

- Apprenticeship training materials such as open book and/or closed book assessments, practical assessments, CDX (paper and computer based)

- MITO Training folder
- Supplier training handouts
- I-CAR training material
- PowerPoint presentations.

### Read employment related material

- Code of Conduct or company policies, processes, and procedures
- Employment agreement
- Training agreement
- Induction material.



## Reading underpinning tasks and skills

Interpret graphic symbols.

- Signs
- Colour coding.

Recognise the features of a range of texts.

- Signs
- Codes
- Forms
- Drawings
- Procedures
- Manuals.

Recognise number formats.

- Serial numbers
- Part numbers
- Vehicle identification numbers (VIN)
- Vehicle registration numbers
- Phone numbers.

Match numbers or codes across different texts.

Understand common and industry vocabulary.

Understand common and industry abbreviations.

Find out the meaning of unfamiliar words or phrases.

Use manuals as a reference source.

Follow written instructions (which may include diagrams).

Use a guide to document contents.

- Index
- Table of contents
- Key
- Legend.

Identify the main points from a page of text.

Scan text or table or label to find specific piece of information.

Read text thoroughly.

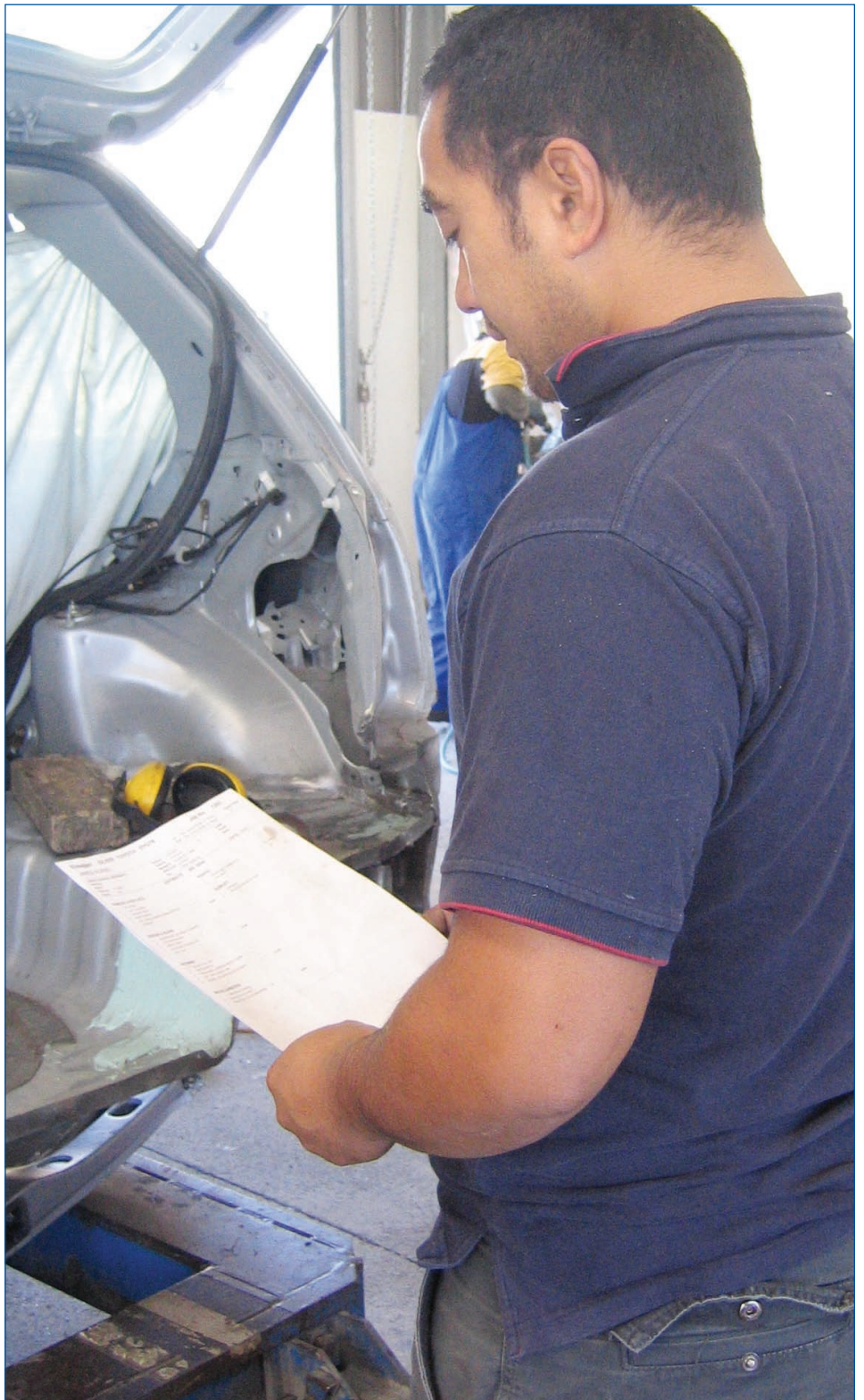
Make inferences based on what written material does not say.

Understand information in graphic material.

- Tables
- Graphs
- Diagrams
- Charts
- Drawings and specifications.

Interpret material read.

- Summarise material read in own words
- Take notes from material read
- Report accurately on the information read.



## Writing tasks

### Write short notes

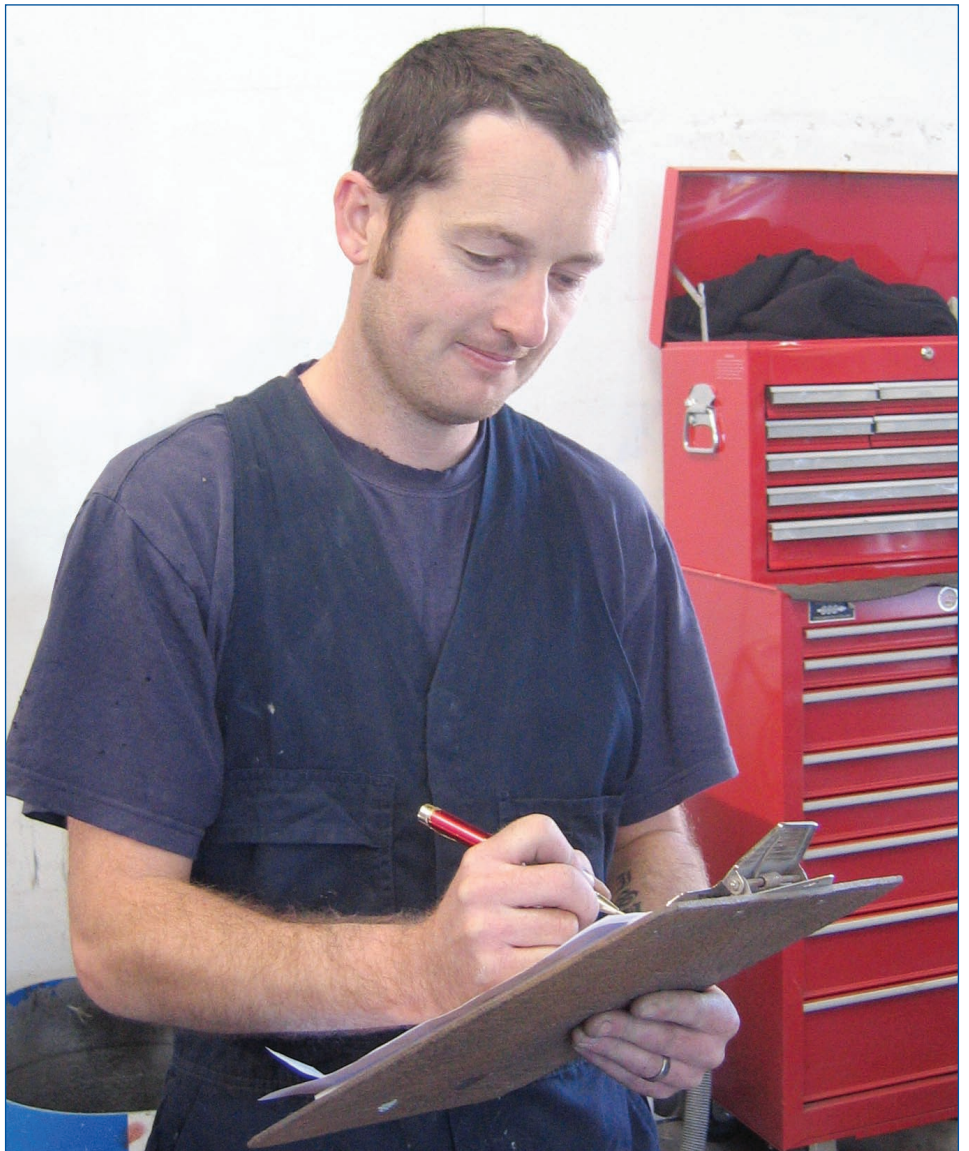
- List of parts required
- Customer name and details for estimator to contact.

### Complete workplace forms

- Job sheets
- Repair checklists
- Time sheets and leave forms.

### Write for training purposes

- Record notes in MITO Practical Jobs Record Book
- Complete exercises in study guides
- Complete MITO Training Folder
  - including Practical Task Evidence Sheets
- Write answers to open book and closed book assessment questions.



## Writing underpinning tasks and skills

Understand that different writing styles are used for different types of writing.

- Notes
- Lists
- Checklists
- Forms
- Study guide exercises
- Open and closed book assessment answers.

Complete forms using numbers, single words, or short sentences.

- Handwriting must be legible
- Abbreviations can be used
- Spelling must be understandable, but correct spelling is not essential
- Grammar and punctuation must be understandable.

Take notes from training material read (during their apprenticeship).

Write short answers to assessment questions (during their apprenticeship).

- Handwriting must be legible
- Abbreviations can be used
- Spelling must be understandable, but correct spelling is not essential
- Grammar and punctuation must be understandable.

## Speaking and listening tasks

*Speaking and listening includes non-verbal communication*

### Listening

- Listen to instructions from workshop supervisor
- Listen and respond to requests for help from colleagues
- Listen to explanations and on-job training.

### Speaking

- Ask questions to ensure you have understood what another person said
- Ask for assistance when needed
- Report work progress to workshop supervisor
- Report issues or potential hazards to supervisor.

### Interactive speaking and listening

- Communicate with colleagues (teamwork) during day to day work situations
- Make suggestions to help other collision repair technicians fix a vehicle
- Communicate in noisy environment using hand signals and gestures

- Participate in team meetings or briefings
- Participate in technical training sessions with supplier or I-CAR representatives
- Answer oral questions during unit standard assessments
- Discuss apprenticeship progress with MITO Industry Training Advisor (ITA).

### Interactive speaking and listening - customer contact

- Talk politely and appropriately to customers.

*Note: apprentices rarely speak to customers or insurance assessors about the details of a vehicle repair. The estimator or a senior collision repair technician carries out this task. Apprentices are most likely to have customer contact when dropping customers off or picking them up.*



## Speaking and listening underpinning tasks and skills

Speak clearly.

Discuss topics which are appropriate in work context.

Use words, pronunciation, and tone appropriate to situation and audience.

Open and close conversations appropriately.

Give information in a sensible order.

Understand that communication is a two way process.

Use active listening skills.

- Repeat message back to sender
- Summarise instructions in own words
- Use following techniques e.g. say "aha" or "okay" as you follow what someone is saying.

Present and defend a viewpoint.

Read information out loud.

Use hand signals and gestures to communicate in noisy environment.

Use questioning techniques including using open and closed questions to gain information, check understanding and encourage further discussion.

Summarise to check or clarify details.

Use suitable body language.

Read body language of person speaking, or being spoken to, and respond appropriately.

Understand that there are barriers to communication, especially in cross-cultural situations.

Present a positive, enthusiastic image to others.

Use assertive communication techniques.

## Numeracy tasks

- Identify parts by alpha numeric codes
- Count and tally numbers of parts
- Use parts, fastenings and tools that are the correct size for the job
- Identify grit numbers on abrasive products (e.g. sandpaper)
- Interpret schematic vehicle diagrams and assembly diagrams
- Measure distances and angles on vehicle using ruler, measuring tape, callipers and other measuring equipment
- Take accurate measurements to establish if chassis is out of alignment
- Calculate difference between current measurement and required measurement
- Adjust chassis back to correct alignment
- Measure panels to create welding templates
- Set welder to correct temperature and settings to complete a weld
- Mix materials following instructions on the container (includes using ratios and measuring specific quantities – e.g. filler)
- Accurately record the time taken to complete a job (may involve fractions of an hour)
- Follow directions to pick up or drop off location
- Use maps to find pick up or drop off location.

## Numeracy underpinning tasks and skills

Recognise numbers as part of a code.

Use numbers.

- Whole numbers
- Decimals
- Fractions
- Percentages
- Ratios
- Negative numbers.

Do number problems (convert from imperial to decimal or back).

- Addition
- Subtraction
- Multiplication
- Division.

Understand place value.

Estimate quantities.

- Length
- Time
- Number.

Measure accurately.

- Length
- Time
- Number
- Temperature
- Volume.

Understand difference between imperial and metric measurements.

Use 12 or 24 hour clock.



## Critical thinking tasks

*Critical thinking relates to how we use knowledge and experience to make decisions about what we will do.*

- Assess what damage was caused by the collision
- Recall similar damage situations from past experience to help decide how to complete the repair
- Identify correct method of repair (e.g. weld, rivet or glue)
- Plan a step by step process to complete the work
- Work in a logical order (up from the chassis)
- Determine the correct settings and temperature to weld different materials
- Deal with problems e.g.
  - injury
  - health and safety incidents
  - dangerous goods
- Identify other items that need repairing that are not on the job sheet
- Get workshop supervisor's approval before completing work not listed on the job sheet
- Ask for help when needed.



## Critical thinking underpinning tasks and skills

Use problem solving methodology.

- Identify issue
- Identify possible solutions
- Determine best outcome
- Decide on plan of action
- Carry out plan.

Develop knowledge of common and unusual repairs and how these were satisfactorily fixed.

Apply knowledge of professional trade practice to work carried out.

Apply knowledge of safety requirements and principles to work practice.

Identify when personal knowledge and skill are sufficient to work on own.

Identify when personal knowledge and skill are not sufficient and know who to ask for help.

Recall and follow specified procedures to deal with problems.

## Information and Communication Technology tasks

Some collision repair technicians

- Use computer based systems to clock on and off specific jobs

- Consult body repair manuals or find specifications held on CD or the internet
- Take and save digital photographs of the progress of their work

- Use specialist computer based chassis alignment systems
- Access and use computer-based training materials.

## Information and Communication Technology underpinning tasks and skills

Operate a computer or digital device.

- Start the computer or device
- Log-in if needed
- Start appropriate application
- Exit appropriate application
- Turn off computer or device.

Identify elements of computer applications and the function of the element (e.g. menus and menu options, command buttons, icons, toolbars).

Identify appropriate computer application for task (e.g. spreadsheet, word processor, e-mail, web browser, drawing, company systems).

Operate computer application(s).

Enter or update data using a computer (using keyboard, mouse or other input devices).

Connect devices (e.g. digital camera) to computer.



## Link to Learning Progressions for Adult Literacy and Numeracy

The Tertiary Education Commission has developed the Adult Learning Progressions. They provide a framework and language for describing literacy and numeracy skills and knowledge. There are strands for Reading, Writing, Speaking, Listening and Numeracy. Each strand is divided into progressions and there are six steps (step 1 is lower and step 6 is higher). There are assessment tools that measure what step a person is on at the different strands.

We can use the Adult Learning Progressions to help us understand how to build the literacy and numeracy skills and knowledge that Collision Repair apprentices and technicians need.

The information here explains how the tasks described in this profile relate to the Adult Learning Progressions.

### Read with Understanding:

All Collision Repair apprentices will read a small range of on-job forms, signs and short instructions. These texts map to step 2 on the Read with Understanding strand.

Apprentices need to quickly learn to read specialist terms relating to vehicles and collision repair. The specialist vocabulary used in Collision Repair maps to step 4 and 5 on the Decoding and Vocabulary progressions of the Read with Understanding strand.

To use their MITO learning material, apprentices also need to be able to locate, organise, summarise, compare and evaluate information from a range of texts. These skills map to step 4 and 5 on the Read with Understanding strand.

Collision Repair apprentices will need to quickly develop their reading skills so that they can achieve step 4 on the Read with Understanding strand.

### Write to Communicate:

Collision Repair apprentices complete the same simple writing tasks as qualified technicians. Examples include filling in job sheets detailing work completed, and marking checklists. Most writing is one word or short sentences, and little punctuation is required. These tasks map around step 1 and 2 on many of the progressions in the Write to Communicate strand.

Apprentices need to be able to spell and write specialist terms relating to vehicles and collision repair. The specialist vocabulary used in Collision Repair maps to step 4 on the Spelling and Vocabulary progressions of the Write to Communicate strand.

As part of their training, Collision Repair apprentices must take notes to remember what they have learned, write answers to assessment questions, and complete their MITO practical task records. These tasks map to step 3 and 4 on the Write to Communicate strand.

Collision Repair apprentices will need to quickly develop their writing skills so they can achieve step 3 to 4 on the Write to Communicate strand.

### Speak to Communicate and Listen with Understanding:

Collision Repair technicians and apprentices use their speaking and listening skills all the time during their working day. At the beginning of their apprenticeship, Collision Repair apprentices take part in simpler conversations, using words they already know. These tasks map to step 3 on the Listen with Understanding strand, and step 2 to 3 on the Speak to Communicate strands.

Apprentices must have strategies to help when comprehension breaks down, as this will help them understand detailed instructions and explanations from their on-job trainers.

Apprentices need to quickly develop their speaking and listening skills and need to be at least at step 4 on most progressions of the Listen with Understanding and Speak to Communicate strands. They will also need to get to Step 4 to 5 on the Listen with Understanding Vocabulary progression, as they will be exposed to specialist collision repair words every day.

### Numeracy Progression Strands:

Collision Repair technicians carry out tasks (e.g. measuring vehicles) that require them to be at step 5 to 6 on the Numeracy Progression strands: Make Sense of Number to Solve Problems, and Measure and Interpret Shape and Space. They need a high level ability to visualise shapes and transformations, as their work is focussed on getting three dimensional objects back to the shape they were before being damaged.

Apprentices will need to either have these numeracy skills and knowledge when they start their apprenticeship, or develop them very soon after coming into their apprenticeship.

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