Automotive Repair & Maintenance
NQF Level 2

Sparrow Consulting

STUDENT’S BOOK
TVET FIRST
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Topic 1
Health and safety in an automotive workshop
Module 1

Describe workshop safety and prevention of accidents

Overview
At the end of this module, you should be able to:
• Unit 1.1: Distinguish between an accident and an incident.
• Unit 1.2: Identify the factors that can lead to an accident or an incident.
• Unit 1.3: Describe the basic methods of preventing accidents.
• Unit 1.4: Explain the advantages of accident prevention.

Introduction
In this module you will learn about some aspects of general workshop safety. You will specifically learn about accidents and incidents in the workshop and what steps should be taken to avoid causing accidents or incidents in the workshop.

Unit 1.1: Distinguish between an accident and an incident

What is an incident?
An incident is an uncontrollable event that may result in injury or damage to property but not always.

What is an accident?
Although any event that occurs is an incident, if someone is injured or some equipment or property is damaged, the event is considered to be an accident. An accident is still considered an incident but its importance has been escalated because there has been an injury or some damage.

Words & Terms
workshop: in this book the term ‘workshop’ refers to an automotive workshop
escalate: to become much worse or more serious
Module 1: Describe workshop safety and prevention of accidents

Example 1

Let us consider a ladder that slips but does not fall. This is considered to be an incident because the ladder did not fall and nobody was injured and no damage was caused. If the ladder does fall but there is no damage and no one is injured, this is still considered to be an incident.

However, if there is someone on the ladder and this person is injured when the ladder falls, or if the ladder falls and damages some equipment, then the incident is considered to be an accident.

All accidents and incidents must be reported and recorded. If the number of incidents in a workshop increases, then the chance of an accident occurring also increases. If more and more accidents are happening in a workplace, it becomes more likely that a major accident or fatality may occur.

Assessment activity 1.1

Individual activity

State whether each of the following is an accident or an incident:

1. A fire starts in the workshop. Everybody is safely evacuated but the workshop is badly damaged.
2. A ladder in the storeroom is knocked over and a worker hurts his or her back.
3. Used oil is spilled in the workshop. No one is hurt and the oil can be cleaned up without any damage or expense.
4. A worker knocks over a tool rack but no tools are damaged.
5. The hydraulic lift in a workshop fails. A motor vehicle falls off and is badly damaged.
6. During the night while there is nobody in the workshop, an empty storeroom shelf falls over. However, the next morning it can be easily lifted up and no damage has been caused.

Think about it

Do you think that people who work carefully and safely will have more or fewer incidents and accidents in the workshop?

Unit 1.2: Factors that can lead to an accident or an incident

There are many different factors that can lead to an accident or an incident. These factors can be divided into two main categories, namely unsafe actions and unsafe conditions.

It is important that you are able to identify the different factors that may lead to an accident or incident. If you work carefully and safely, you will be able to reduce the number of accidents and incidents that occur.
Unsafe actions

The following actions are hazardous and can result in an accident or an incident:

- Working at a dangerous rate, for example carrying out work activities too quickly or too slowly.
- Using the wrong safety equipment or not using all the safety equipment available for a task.
- Failing to store equipment and materials properly after they have been used, or leaving equipment lying around in the workshop.
- Carrying out work activities and adjustments on power tools or vehicles while they are moving.
- Behaving in an inappropriate manner in the workshop, or behaving dangerously.
- Disobeying the workshop’s safety regulations and instructions.

It is important that you avoid doing any of these unsafe actions when you are in the workshop.

Unsafe conditions

Some of the conditions in an automotive workshop are unsafe and can cause accidents if they are not attended to. The following are some examples:

- A workshop has been badly planned and laid out.
- The correct safety guards for equipment are not in place.
- Insufficient safety equipment is available.
- There is poor lighting, which makes the workshop unsafe.
- There is not enough space to move about.
- Poor ventilation in an automotive workshop is unsafe.
- Faulty machinery or safety equipment could lead to accidents.
- Workers are not properly trained in the work activities that have to be carried out.

Vehicles pose the greatest risk in an automotive workshop. Care needs to be taken when they are being driven in and out of the workshop and when they are being lifted by hoists or other lifting equipment. Vehicles can represent both unsafe conditions and unsafe actions.

Example 2

Electrical systems and combustion systems pose risks to workers working on them. Exhaust gases can also be dangerous if the workshop does not have adequate ventilation.

Any unsafe condition or action in the workplace can lead to an accident or an incident. It is your responsibility to be vigilant and work carefully so that you can identify unsafe factors before they lead to an accident or an incident. When you identify one of these factors you need to fix the problem immediately or notify your workshop supervisor if you are unable to do so.
Although rare, some unsafe conditions are part of the workshop and you will not be able to change them. However, you must be aware of any unsafe conditions and make sure that you take them into consideration before performing any task.

**Assessment activity 1.2**

**Individual activity**
1. Why must you work carefully in a workshop?
2. Name three unsafe actions that should be avoided in a workshop.

**Unit 1.3: Basic methods of preventing accidents**

To prevent accidents, you need to do the following:

- Work according to workplace instructions.
- Work safely.
- Apply good house-keeping (Module 2).
- Use correct **personal protective equipment (PPE)** (Module 6).
- Make sure that all equipment and tools are working correctly before using them.

**In the workplace**

Remember, in the workshop safety always comes first. Always follow all the safety instructions that are in place in your workshop.

- Always store tools and equipment after use.
- Make sure that the workshop has good lighting.
- Prevent slips, trips and falls.
- Make sure that you know the routes for vehicles coming in or going out of the workshop as well as pedestrian routes.

**Assessment activity 1.3**

**Group discussion**

Make a list of at least FIVE types of hazards and discuss what would be the best way of preventing them. Write down a brief description of the methods your group has decided on in your workbook. Discuss it with the rest of the class.

**Words & Terms**

**PPE:** personal protective equipment, such as overalls, goggles, boots, gloves, breathing masks, etc.
Unit 1.4: The advantages of accident prevention

There are many advantages of accident prevention, but the most important are that:

- The workshop will be safe for people and equipment in the work area.
- The business will make money. When an accident happens, money is lost due to downtime, and repairs or medical expenses must be paid for.
- The efficiency is increased. This means that more work can be done and more people would want to bring their vehicles to the workshop.

Figure 1.2: People in a workshop must consider safety to prevent injuries at all times

Assessment activity 1.4

Individual activity

1. Why is it important to prevent accidents?
2. How does accident prevention make the workplace more efficient?