

# RIIMPO338E

## Conduct Rigid Haul Truck Operations

### Learner Guide Instructions

Who is this document for?

The learner.

What is in this document?

- Course information that matches the PowerPoint presentation.
- Review questions.
- Practical assessment instructions for learners.

What do you need to do before you use it for the first time?

1. Rebrand the document.
2. Review the document as part of your validation process.
3. Set the reading and test time limits that are highlighted in pink at the end of the document.

**See the 'Read Me First' document for a complete set of instructions on how to use these resources.**

# LEARNER GUIDE

# RIIMPO338E Conduct Rigid Haul Truck Operations

Learner Name:	
Learner ID:	
Learner Contact Number:	
Learner Email Address:	
Date Training Commenced:	

## This Book Contains:

- ☐ Course Information.
- ☐ Review Questions.
- ☐ Practical Assessment overview and instructions.

# Table of Contents

<b>1.1 Introduction .....</b>	<b>5</b>
1.1.1 What is a Haul Truck?.....	5
1.1.2 Parts of a Haul Truck .....	5
<b>1.2 Work Safely .....</b>	<b>6</b>
1.2.1 Health & Safety Rules .....	6
1.2.2 Operations Documentation .....	6
1.2.3 How to Keep Everyone Safe .....	7
Review Questions.....	7
<b>1.3 Work Instructions .....</b>	<b>8</b>
1.3.1 Reading and Checking Your Work Instructions .....	9
1.3.2 Work Method Statements.....	9
1.3.3 Plans and Specifications .....	9
1.3.4 Geological and Survey Data.....	10
1.3.4.1 Geological Data.....	10
1.3.4.2 Survey Data.....	10
Review Questions.....	11
<b>1.4 Inspect and Prepare the Work Area .....</b>	<b>12</b>
Review Questions.....	13
<b>1.5 Hazard Identification and Control.....</b>	<b>13</b>
1.5.1 Identify Hazards .....	13
1.5.2 Control Hazards.....	14
1.5.2.1 Personal Protective Equipment.....	16
1.5.3 Take-5 Risk Assessments .....	16
1.5.3.1 Completing a Take-5 Risk Assessment.....	17
1.5.3.2 Filling in a Take-5 Form.....	17
Review Questions.....	18
<b>2.1 Check the Haul Truck .....</b>	<b>19</b>
2.1.1 Visual Pre-Start Checks .....	19
2.1.1.1 Ground Level Checks.....	20
2.1.1.2 Upper Deck and Cabin Checks .....	21
2.1.2 Start the Haul Truck .....	22
2.1.3 Operational Checks.....	22
2.1.3.1 Fire Suppression System.....	23
2.1.4 Report All Faults .....	23
Review Questions.....	23
<b>3.1 Drive the Haul Truck.....</b>	<b>26</b>
3.1.1 Moving Off .....	27
3.1.2 Shifting Gear .....	28
3.1.3 Braking .....	28
3.1.3.1 Brakes.....	28
3.1.3.2 Retarder.....	28
3.1.3.3 Park Brake.....	29
3.1.4 Travelling Downhill.....	29
3.1.5 Travelling in Reverse .....	30
3.1.6 Turning.....	30
3.1.7 Stopping.....	30
3.1.8 U-Turns .....	31
3.1.9 Working around Other Vehicles .....	31
Review Questions.....	32
<b>3.2 Adapt to Changing Conditions.....</b>	<b>33</b>
Review Questions.....	35

<b>3.3 Load, Haul and Dump Materials .....</b>	<b>35</b>
3.3.1 Loading.....	38
3.3.1.1 Single-Sided Loading .....	38
3.3.1.2 Double-Sided Loading .....	38
3.3.1.3 Drive-By Loading.....	38
3.3.1.4 Bucket Loading .....	39
3.3.2 Hauling Materials.....	39
3.3.3 Dumping Materials.....	40
Review Questions.....	41
<b>3.4 Responding to Monitors and Alarms .....</b>	<b>43</b>
3.4.1 Respond to Haul Truck Emergencies.....	44
3.4.2 Monitor and Check for Hazards.....	45
3.4.3 Check Completed Work.....	46
Review Questions.....	46
<b>3.5 Park the Haul Truck.....</b>	<b>48</b>
3.5.1 Shut Down the Haul Truck .....	48
Review Questions.....	48
<b>4.1 Post-Operational Checks.....</b>	<b>49</b>
4.1.1 Reporting Faults .....	49
Review Questions.....	50
<b>4.2 Carry Out Maintenance Tasks .....</b>	<b>50</b>
4.2.1 Refuel the Haul Truck .....	51
4.2.2 Return the Vehicle to Service .....	51
4.2.2.1 Removing Locks and Tags .....	52
Review Questions.....	52
<b>4.3 Processing Maintenance Records.....</b>	<b>53</b>
Review Questions.....	54
<b>Appendix A – Rigid Haul Truck Inspection Checklist .....</b>	<b>55</b>
<b>Practical Assessment Instructions .....</b>	<b>57</b>
Conditions of Assessment .....	57
Personal Protective Equipment (PPE) Requirements.....	57
Grounds for Stopping the Assessment .....	57
Achieving a Satisfactory Outcome.....	57
Practical Assessments.....	58

# 1.1 Introduction

This course is based on the unit of competency **RIIMPO338E Conduct Rigid Haul Truck Operations.**



In this course you will learn about:

- ◆ Planning and preparing for your work.
- ◆ Checking the equipment.
- ◆ Using the haul truck.
- ◆ Maintenance and housekeeping.

## 1.1.1 What is a Haul Truck?

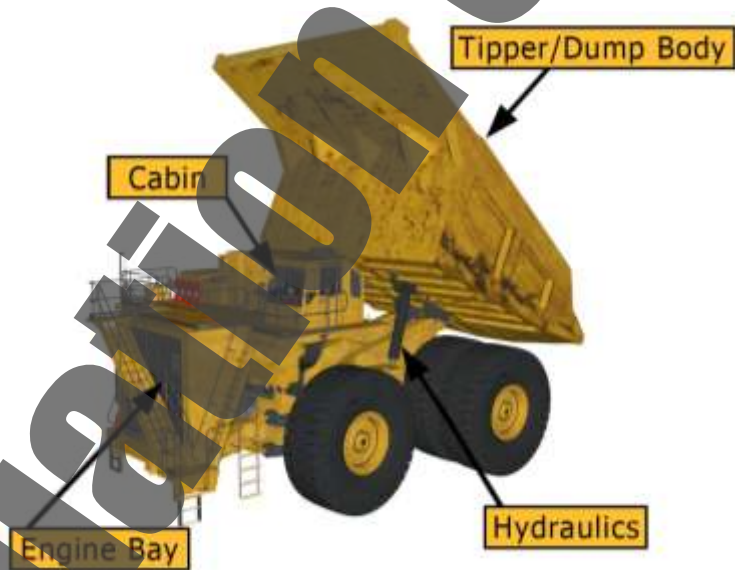
A haul truck is an off-road or off-highway rigid dump truck. Haul trucks have been designed specifically for high production areas such as mining and civil construction.

The size of the haul truck can vary from 45 tonne capacity through to 360 tonnes. Ultra-class haul trucks are extremely large versions of the haul truck.

Rigid haul trucks are capable of carrying large payloads at speeds of up to 70km/h. This makes them suited to long hauls on flat roads.



## 1.1.2 Parts of a Haul Truck



<b>Engine Bay</b>	Where the engine is located.
<b>Cabin</b>	Part where operator sits and operates the truck.
<b>Hydraulics</b>	Used to tip the body to release its contents.
<b>Tipper/Dump Body</b>	Part where materials are dumped and carried during haulage.

Components may vary with the different makes and models of haul trucks, so for exact details on the components for the machine you are operating, check your operator's manual.



## 1.2 Work Safely

You must follow all safety rules and instructions when performing any work. If you are not sure about what you should do, ask your boss or supervisor. They will tell you what you need to do and how to do it in a safe way.



### 1.2.1 Health & Safety Rules

Every workplace has to follow laws and rules to keep everyone safe. There are 4 main types:

<b>Acts</b>	These are laws that you have to follow.
<b>Regulations</b>	These explain what the law means.
<b>Codes of Practice</b>	These are instructions on how to follow the law, based on industry standards.
<b>Australian Standards</b>	These tell you what the minimum requirement is for a job, product or hazard.

Some states use OHS laws, and other states use WHS laws. They both talk about the same thing, but use different words or names for people. If you have any questions about safety rules you should talk to your boss or supervisor.

### 1.2.2 Operations Documentation

Before starting your work you need to make sure you have access to all operations documentation for the job. This will help you to do your work in the safest way and make sure all work is compliant.

Operations documentation includes:

<b>Site Details</b>	The information and safety requirements of the workplace environment (where you will be working).
<b>Hazard Details</b>	Any hazards in the work area or related to the work. This could also include instructions on how to handle dangerous or hazardous materials.
<b>Task Details</b>	Instructions of what the work is or what you will be doing (this can include diagrams or plans). Also instructions on how to safely do the job.
<b>Faulty Equipment Procedures</b>	Isolation procedures to follow or forms to fill out.
<b>Signage</b>	Site signage tells you what equipment you need to have, or areas that are not safe to be in.
<b>Emergency Procedures</b>	Instructions on what to do in emergency situations, for example if there is a fire, accident or emergency where evacuation or first aid is needed.
<b>Equipment and Work Instructions</b>	Details of how to operate plant and equipment and the sequence of work to be done.

### 1.2.3 How to Keep Everyone Safe

WHS law says that all companies and workers need to keep themselves and other people safe while they work. This is called a duty of care.

To keep yourself and other workers safe you need to:

- ◆ Follow your instructions.
- ◆ Follow all workplace rules.
- ◆ Make sure all equipment is safe to use.
- ◆ Carry out your work safely.
- ◆ Report any problems.



If you think something is dangerous tell your boss or supervisor as soon as possible.



Your worksite will also have instructions for working safely including:

- ◆ Emergency procedures, including using fire fighting equipment, first aid and evacuation.
- ◆ Handling hazardous materials.
- ◆ Safe operating procedures.
- ◆ Personal protective clothing and equipment.
- ◆ Safe use of tools and equipment.

### Review Questions

<b>1.</b>	What are the 4 main types of laws and rules to keep everyone safe?	<input type="checkbox"/>
1.		
2.		
3.		
4.		

# 2.

List 3 things that may be included in 'operations documentation'.



1.

2.

3.

## 1.3 Work Instructions

You need to be clear about what work you will be doing. Make sure you have everything about the job written down before you start. This includes what you will be doing, how you will be doing it and what equipment you will be using.



Make sure you have all of the details about where you will be working. For example:

- ◆ **The Site** – Is there clear access for all equipment? Are there obstacles in the way? What are the ground conditions like? Is the site ready for your work to begin? Are there any 'out of bounds' areas you need to avoid?
- ◆ **The Weather** – Is there wind, rain or other bad weather? Is it too dark?
- ◆ **Traffic** – Are there people, vehicles or other equipment in the area that you need to think about? Do you need to get them moved out of the area? Do you need to set up barriers or signs?
- ◆ **Hazards** – Are there dangerous materials to work around or think about? Will you be working close to other people?

You also need to make sure you have all of the details about the kind of work you will be doing:

- ◆ **The Task** – What kind of material is being moved? How much is there to move? How long do you have to complete the work? Where will the load be discharged?
- ◆ **Plant** – What type of plant will be used? How big is it? How much room does it need? Is it available?
- ◆ **Communications** – How are you going to communicate with other workers?
- ◆ **Procedures & Rules** – Do you need any special permits or licences? Are there site rules that affect the way you will do the work e.g. contamination control requirements?





### 1.3.1 Reading and Checking Your Work Instructions

All work needs to follow worksite, environment and company safety procedures.

Procedures help to make sure that all work is done in a safe way, without damaging equipment or putting people in unsafe situations. They also help to make sure that work is done in the correct order and doesn't interrupt or get in the way of other work that is happening on the site.

Your work instructions will tell you the safest way to do the job, and the equipment that you will need to use. It is a good idea to check your work instructions with your boss or supervisor to make sure you know exactly what you need to do.

If you don't know where to get your instructions or you can't understand them, you can ask your boss or supervisor. They will tell you where to find your work instructions and explain what they mean.



### 1.3.2 Work Method Statements



Many worksites require a work method statement before any work can start. A work method statement is a list of steps that outlines how a job will be done. It also includes any hazards that occur at each step, and what you need to do about them.

These statements can also be known as a Safe Work Method Statement (SWMS), Job Safety Analysis (JSA) or Safe Operating Procedure (SOP).

### 1.3.3 Plans and Specifications

Some of your work instructions might be given to you in plans, maps, reports and specifications. You will need to get the information out of these documents and use it to do your job.

Project specifications will tell you the types, quantities, grades and classifications of materials you will be working with.

Make sure you are familiar with the site product or materials before you begin work. Some materials are more cohesive or sticky while others may be much less stable to work with, or create hazards like dust, contamination or damage to equipment if they are not handled just the right way.



Plans are usually 'scale drawings' that represent a large area on a small sheet of paper and show proportion at the same time.



Project plans and maps give you an overview of the site, for example:

- ◆ The location of your work area in relation to the whole mine site.
- ◆ The position of stockpiles, work zones, roads and access areas.
- ◆ The location of environmentally sensitive or 'no go' areas.
- ◆ Contours, or the lay of the land, e.g. slopes, banks, depressions.

### 1.3.4 Geological and Survey Data

Geological and survey data is used to guide you through a job. It tells you what the area is like, what things you will need to think about and what work you need to complete.

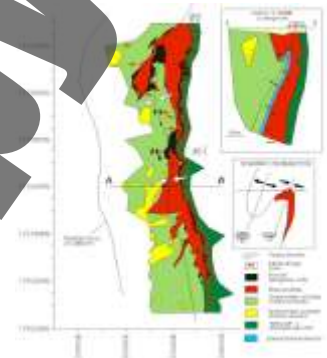


#### 1.3.4.1 Geological Data

Geological data gives you information about:

- ◆ Rock or material types and characteristics.
- ◆ Wet and dry areas.
- ◆ Water tables or other sources of water.
- ◆ Broken ground, faults or joints.
- ◆ Compaction levels.

All of this information will help you to decide where and how you should travel with equipment and areas to avoid.



#### 1.3.4.2 Survey Data



Survey data covers information about job outcomes including:

- ◆ Bench heights and widths.
- ◆ Floor heights.
- ◆ Floor, ramp and bench grades.
- ◆ Underground working and voids.

Survey data can also be used to mark out:

- ◆ Work circuits.
- ◆ Pick up areas.
- ◆ Dump areas.
- ◆ Spill zones.
- ◆ Routes or traffic ways.



## Review Questions

**3.**

What details about the work area can you get from your work instructions?

☐

**4.**

What is a 'Work Method Statement'?

☐

**5.**

What information can you get from geological data?

☐

## 1.4 Inspect and Prepare the Work Area

Before you start any work you need to look around the site. The inspection and preparation of the worksite includes:



- ◆ Working out the path of movement for plant, vehicles and materials.
- ◆ Identifying hazards, and taking suitable actions to deal with them.
- ◆ Making sure all equipment, resources and workers are available for the task.

It is important to coordinate with other workers when you are inspecting and preparing the site to make sure everyone knows what is going on, what you are planning to do and what they need to do.

All workers on site must understand their own role and the roles of others before starting work. It helps to make sure work is done safely and efficiently.

Workers you may need to coordinate with includes:

- ◆ Other mobile plant operators.
- ◆ Processing plant operators.
- ◆ Maintenance workers.
- ◆ Water truck/cart operators.
- ◆ Service vehicle operators.
- ◆ Crane and float operators.
- ◆ Contractors.
- ◆ Inspectors, both internal and external, including WHS, environmental and quality assurance officers.
- ◆ Supervisors.
- ◆ Site visitors.



## Review Questions

<b>6.</b>	List 3 examples of workers that you would coordinate with while inspecting and preparing the work area.	<input type="checkbox"/>
<div>1.</div> <div>2.</div> <div>3.</div>		

## 1.5 Hazard Identification and Control

Before you start work, you need to check for any hazards or dangers in the area. If you find a hazard or danger you need to do something to control it. This will help to make the workplace safer.



### 1.5.1 Identify Hazards

Part of your job is to look around to see if you can find any hazards before you start any work.

A **hazard** is the thing or situation that causes injury, harm or damage.

When you start checking for hazards, make sure you look everywhere. A good way to do this is to check:

- ◆ Up high above your head.
- ◆ All around you at eye level.
- ◆ Down low on the ground (and also think about what is under the ground).







Some hazards you should check for in the work area are:

- ◆ Overhead clearance.
- ◆ Work area and ground conditions:
  - ◆ Uneven or unsafe ground.
  - ◆ Unstable faces.
  - ◆ Overhanging rocks.
  - ◆ Excavations.
  - ◆ Holes and potholes.
  - ◆ Soft edges and sinkage areas.
  - ◆ Dust and noise.
- ◆ Fires.
- ◆ People – site personnel or visitors.
- ◆ Handling characteristics of the equipment.
- ◆ The effects of the load as you haul or dump it.
- ◆ Hazardous materials – chemicals, fuel, contaminants, gases or dusts.
- ◆ Weather conditions – electrical storms, wind, heat, floods, fires, humidity.
- ◆ Equipment or machinery – other vehicles, conveyors, fixed plant, abandoned or unattended equipment, ancillary equipment, lifting equipment.
  - ◆ The times when the equipment is moving is the most hazardous.
  - ◆ As an operator, you need to be very aware of your surroundings when moving the vehicle, but you should also keep an eye on other vehicles moving around you.
  - ◆ Follow vehicle movement or traffic plans and your worksite procedures for equipment movements.

## 1.5.2 Control Hazards

After you have found hazards or dangers you need to work out how bad they are:



1. What is the chance that the hazard will hurt someone or cause damage?
2. If it does happen, how bad will the injury or damage be?



Thinking about these things will help you to choose how to control the hazards. Hazards controls need to follow:

- ◆ Legislation (laws).
- ◆ Australian Standards.
- ◆ Codes of Practice.
- ◆ Manufacturers' specifications.
- ◆ Industry standards.

The best way to control hazards is to use the Hierarchy of Hazard Control. The hierarchy of hazard control is a range of options that can eliminate, or reduce the risk of hazards.

You start at the top of the list and see if you can take away (eliminate) the hazard or danger.

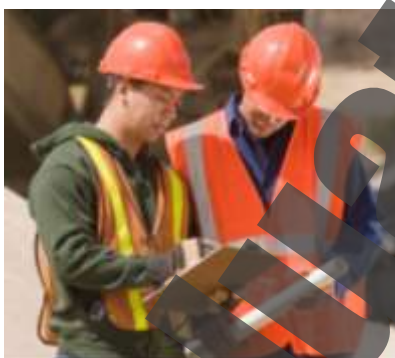
If you can't take it away you move down the list to see if you can swap it for something safer (substitution).

Keep working through the list until you find something that controls that hazard or danger.

This table shows you the 6 different types of controls in order from best to worst:



Hierarchy Level	Action
<b>1. Elimination</b>	Completely remove the hazard. This is the best kind of hazard control.
<b>2. Substitution</b>	Swap a dangerous work method or situation for one that is less dangerous.
<b>3. Isolation</b>	Isolate or restrict access to the hazard.
<b>4. Engineering Controls</b>	Use equipment to lower the risk level.
<b>5. Administrative Controls</b>	Site rules and policies attempt to control a hazard.
<b>6. Personal Protective Equipment</b>	The least effective control. Use PPE while you carry out your work.



It is important to think about all of the options available when deciding on the best hazard controls. You may need to use more than 1 control measure to bring the risk level down to an acceptable level.

Check the situation after you have applied a control measure to see if more controls, or different controls are needed to make the job safe. If more controls are needed, make sure they are applied before you start or continue the work.

Talk to your supervisor or safety officer if you are not sure if it is safe enough to carry out your work. If you think the hazard is still too dangerous you should not try to do the work.