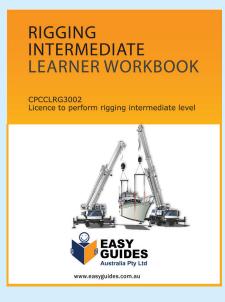
## The benefits of using a Trainer Value Pack









Assessment Instrument

Mapping
of materials
to unit of
compentency

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### **LEARNER GUIDE**





# Tracked Front End Loader TICKET

#### **Training support material for:**

#### RIIMP0322F (Tracked)

Conduct civil construction tracked front end loader operations

#### Produced by:



### Introduction to Tracked Front End Loaders



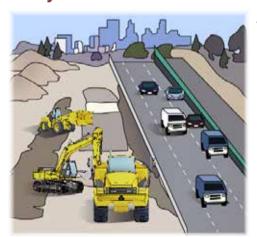
#### What do you use a front end loader for?

- Agriculture farming
- Construction
- Clean up
- · Moving dirt/rocks etc
- Can use for lifting purposes



#### What industries do you use a front end loader in?

Civil construction



Mining

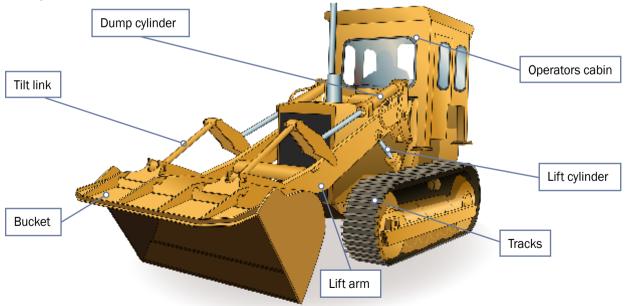


#### An example of a tracked front end loader

A tracked front-end loader is a type of machine that has a front mounted square wide bucket connected to the end of two booms (arms) to scoop up loose material such as dirt, sand or gravel and move it from one place to another without pushing the material across the ground.

A tracked front end loader is commonly used to move material from ground level and deposit it into an awaiting dump truck, stockpile or into an open trench excavation.

Front end loaders also come in wheeled models (refer RIIMPO321D Conduct civil construction wheeled front end loader operations).

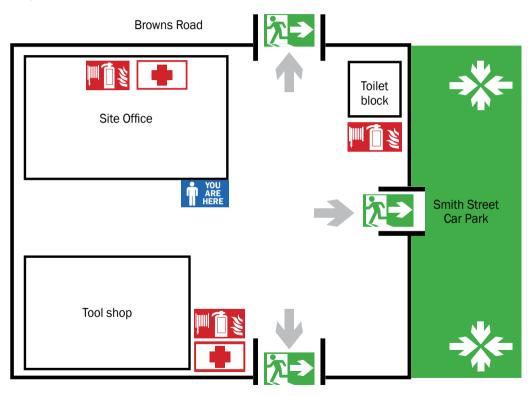


PC 1.7 GENERAL INFORMATION

Safety plan (continued)

#### Site evacuation plan — Example





PC 1.4, 1.6 GENERAL INFORMATION

#### **Tools and equipment**

Here are some typical tools and equipment you might need.

#### Personal protective equipment (PPE)

- Steel cap boots
- High visibility safety vest
- Hearing protection
- Hard hat
- Goggles/glasses
- Gloves
- Dust mask
- Sunscreen

#### **Hand tools**

- · Shovel and levels
- Socket sets
- Screwdrivers or wrenches
- Wire brush
- Spanners





#### **QUESTION 19**

What does the traffic management plan (TMP) tell you?

It tells you how to control vehicles in and around the worksite. It helps keep the site safe for you and others.

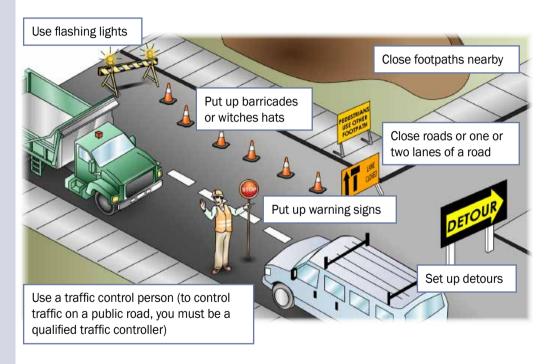
You may require a traffic control licence in your state or territory.



#### **QUESTION 20**

What can you do to control traffic in and around a worksite?

You can:



#### **OUESTION 21**

Where do you put up warning signs?

Near underground services



Near dangerous places



In places you need to control traffic









On the site fencing



#### **QUESTION 22**

What kinds of tools and equipment might you use when doing earthmoving work?

Chocks, blocks or safety bars to stop the bucket dropping



Crow bars

Hand tools such as spanners, ratchets, wrenches, screwdrivers, hammers



Socket set



... CONTINUES ON NEXT PAGE

## Tracked loader

### **Review Questions**

(Formative assessment)

### **LEARNER'S COPY**



RIIMPO322E Conduct civil construction tracked front end loader operations

This resource was developed by:



Question 1 (PC 1.1, 1.2)	
What are the National Work Health (WHS) and Occupational Health and Safety (OHS) Acts a	bout?
Question 2 (PC 1.1, 1.2)	
200511011 2 (1 0 1.1, 1.2)	
Jnder WHS/OHS laws, what are your responsibilities while working?	
Question 3 (PC 1.1, 1.2)	
What do codes of practice explain?	
Question 4 (PC 1.1, 1.2)	
What do Australian Standards explain?	

## **Question 9** (PC 1.1, 1.2) What do the job's work instructions explain? Question 10 (PC1.7) If a fire starts what are four (4) steps that should be taken? **Question 11** (PC 1.3) How do you choose and set up a location for a stockpile? **Question 12** (PC 1.1) How can you find out the specifications and limits of the machine you will use? Specifications include thing like: Read the operator's manual to find out the limits. The lifting capacity may also be marked on the load chart.

#### **Question 13** (PC 1.2)

How do you find the cubic capacity of an Tracked loader bucket?				
Question 14 (PC1.1, 1.2)				
low can you find out the maximum	safe working load (SWL) of the Tracked loader?			

#### **Question 15** (PC1.1, 1.2)

Using the information provided on the load chart below, determine how much can the Tracked loader lift in the following configuration?

- Radius = 4.6 m
- Hook height = 1.5 m over side.

	Tracked loader load Chart									
	22 tonne Tracked loader fitted with a 3.05m long arm, 1m³ bucket and 600mm slides									
Radius	Max	reach	7.6	7.6m 6.1m		4.6m		3.0m		
Hook height	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side
6.1 m	*3100	*3100	*3450	*3250						
4.6 m	*3150	2650	*3950	3250	*4100	*4100				
3.0 m	*3300	2400	*4450	3050	*5050	4500	*6450	*6450	*10750	*10750
1.5 m	3550	2300	4550	2950	*6050	4200	*8300	*6450	8450	*5450
0 m	3600	2300	4450	2850	6200	4000	*9650	6050	*6900	*6900
-1.5 m	3900	2500	4350	2750	6100	3850	*9650	6050	*10200	*10200
-3.0 m	4654	2950			6100	3900	9650	6000	*14900	12300
-4.6 m	6650	4250					9200	6100	*13800	12700

The ratings are based on 75% tipping load, stationary on firm level ground as per AS 1418.5.

For 'pick and carry loads' on firm level ground the load shall not be greater than 66.7% of tipping load as per AS1418.5 OR 89.9% of the SWL. Where ground is sloping, rough or not firm, the load must be dramatically reduced.

 $<sup>\</sup>ensuremath{^*}$  The ratings do not exceed 87% of hydraulic lifting capacity of 75% of tipping load.

#### **Question 19** (PC 1.3)

danger from a hazard in the workplace.				
What are the six (6) levels in the hierarchy from the first choice to the last choice?				
Question 20 (PC 1.3)				
What does the Environmental management plan (EMP) tell you?				
Question 21 (PC 1.3)				
What environmental challenges should you be careful of when working?				
Question 22 (PC 1.3)				
Why should you check the noise laws for your state or territory before you start work?				

The Hierarchy of Hazard Control is a list of controls that you can use to eliminate or lower the

## **Question 23** (PC 1.3) Who can you ask about underground services on the worksite? **Question 24** (PC 1.3) How can you tell you are near an underground service? **Question 25** (PC 1.3, 2.4) What should you use to excavate if you think there's an underground service nearby? **Question 26** (PC 1.3, 1.7) What could happen if you damage an underground gas line?

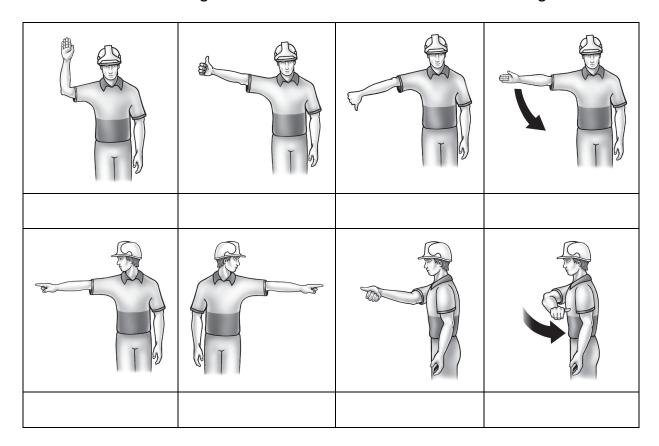
## **Question 27** (PC 1.3, 1.7) What could happen if you damage an underground water pipe? **Question 28** (PC 1.3, 1.7) What is the danger if you damage an underground electrical cable? **Question 29** (PC 1.3, 1.7) Who do you talk to if you damage an underground cable, gas line or other service? Question 30 (PC 1.7) What does the safety plan tell you?

#### **Question 31** (PC 1.4)

What footwear must you wear when using any earthmoving equipment?				
Question 32 (PC 1.2)				
You will work in a hazardous area, for example, a confined space. What type of permit might yo need to get?				
Question 33 (PC 1.3)				
Why is it dangerous to leave the engine running in an enclosed space?				
Question 34 (PC 1.3)				
If you must work in a tunnel or enclosed space, what must the Tracked loader have?				

#### **Question 106** (PC 3.4)

#### Some of the standard hand signals are shown below. What does each of these signals mean?



#### **Question 107** (PC 3.4)

How can you communicate with a fellow worker who is out of your line of sight?					
Question 108 (PC 3.4)					
Why is it dangerous to slew a load when the Tracked loader is not level?					

#### Revision/Assessment Summary (Circle applicable context ie: revision or assessment)

Revision O			OR Assessment		
Knowledge score			/1	32	
Knowledge result			Satisfactory	Not yet satisfactory	
The applicant named on this assessment instrument has been assessed in line with the elements, performance criteria, and knowledge evidence and under the prescribed assessment conditions for unit of competency RIIMPO322E Conduct civil construction tracked front end loader operations. As a result of this assessment the applicant is deemed to be:					
Satisfactory			Not yet sa	tisfactory	
Assessor	Assessor			Date:	
Name:	signature:				
Applicant	Applicant			Date:	
Name:	signature:				
Assessor notes and feedback:					

### Tracked front end loader

## Record of Training Logbook / Verification of competency (VOC)





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### **Contents**

Purpose of this logbook	1
How to use this logbook	2
Sample page	3
Record of training	5
Record of training summary	125



#### **Purpose of this logbook**

This logbook is to record on-the-job training. This logbook can be used in two ways:

#### 1. A company doing in-house training

A company can use this training logbook to show they have met their duty of care obligations under the OHS Act by showing evidence that an operator is trained and competent.

#### 2. A registered training organisation (RTO)

A registered training organisation (RTO) delivering the units of competency from the RII Resources and Infrastructure Industry Training Package can use this logbook as part of a training program to gain a qualification.

#### Supervision by a competent person

The person supervising the operator must be deemed competent to supervise the training. The supervisor/trainer may hold an existing earthmoving licence or qualification, may have a Certificate IV in Workplace Training and Assessing, may have on the job experience gained over time, or any or all of these.

#### Using the logbook for vericaction of competency (VOC)

As well as being a record of training, this logbook can also be used as a document to record evidence of verification of competency.



#### How to use this logbook

- 1. Fill out the details at the start of this logbook operator's name, address etc.
- 2. Read the Record of Training Summary at the back of the logbook. This will tell you the type of tasks you need to do for each Element/Work task. For example, *Plan and prepare* includes identifying the hazards and risks on site and what personal protective equipment (PPE) you need to wear.
- 3. After you have finished working, you can start filling out your logbook. Start by writing down the work you have done.
- 4. Check the Element/Work task section. Tick the boxes that cover the work you did. For example, □ Carry out machine operator maintenance. You may tick more than one box depending on the work that you did (see sample logbook page).
- 5. Make sure you fill in each section of your logbook. Your supervisor will sign the supervisor section if s/he believes the details are correct.
- 6. Finally, when your supervisor believes you have competently covered all of the elements in the Record of Training Summary of the unit of competency, you have completed your logbook.

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	Element/Work tasks	Description of work/training performed
	Plan and prepare Operate the front end loader Attach, secure, lift, carry and place materials Select, remove and fit attachments Relocate the front end loader Carry out machine operator maintenance Conduct housekeeping activities	I looked around the site and found that a busy footpath was near my working area. People walking by might be at risk. I put up barricades and signs to warn people of the danger nearby. I then checked the front end loader. I checked oil, petrol and hydraulic fuel. I checked other parts of the front end loader. Everything was okay.
Image: Control of the control of t	Plan and prepare Operate the front end loader Attach, secure, lift, carry and place materials Select, remove and fit attachments Relocate the front end loader Carry out machine operator maintenance Conduct housekeeping activities	I had to use the front end loader near a trench. The trench was about 2 metres deep. No one had put up any warning signs or barriers. I put up a row of barricades 3 metres away from the trench. This would give me a safe working distance and also keep other people away from the trench.
<ul><li>▼</li><li>□</li><li>□</li><li>□</li><li>□</li></ul>	Plan and prepare Operate the front end loader Attach, secure, lift, carry and place materials Select, remove and fit attachments Relocate the front end loader Carry out machine operator maintenance Conduct housekeeping activities	The job plan said that I needed to use a rock bucket. I fitted this attachment on the front end loader. The work site is noisy. A jackhammer was being used nearby, so I wore some ear muffs while I worked. I also put on other PPE including steel capped boots and a hard hat as there were safety signs telling me to wear these.

Date/time	No. of hours	Machine details	Supervisor/competent person
Date:	15 minutes	Make:         Caterpillar           Model:         980F           Serial No:         12847839	Name: Nathan Deeman Signed: Nathan D Experience/qualifications: 20 years on the job experience and Cert IV
Date:	5 minutes	Make:         Caterpillar           Model:         980F           Serial No:         12847839	Name: Nathan Deeman Signed: Nathan D Experience/qualifications: 20 years on the job experience and Cert IV
Date: 23/02/2015 Start time: am 2.30 pm	20 minutes	Make:         Caterpillar           Model:         980F           Serial No:         12847839	Name: Sam Hasseron Signed: S.H. Experience/qualifications: Cert IV in Training & Assessing and RIIO9 RTO statement of attainment in front end loader

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Element/Work tasks	Description of work/training performed
Plan and prepare Operate the front end loader Attach, secure, lift, carry and place materials Select, remove and fit attachments Relocate the front end loader Carry out machine operator maintenance Conduct housekeeping activities	
Plan and prepare Operate the front end loader Attach, secure, lift, carry and place materials Select, remove and fit attachments Relocate the front end loader Carry out machine operator maintenance Conduct housekeeping activities	
Plan and prepare Operate the front end loader Attach, secure, lift, carry and place materials Select, remove and fit attachments Relocate the front end loader Carry out machine operator maintenance Conduct housekeeping activities	

Date/time	No. of hours	Machine details	Supervisor/competent person
Date:		Make:	Name:
Start time:		Model: Serial No:	Signed: Experience/qualifications:
am			
μιι			
Date:		Make:	Name:
		Model:	Signed:
Start time:		Serial No:	Experience/qualifications:
am			
pm			
Date:		Make:	Name:
		Model:	Signed:
Start time:		Serial No:	Experience/qualifications:
am			
pm			

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#### **MAPPING DOCUMENT**

## RIIMPO322E - Conduct civil construction tracked front end loader operations





The information and questions contained in the Learner Guide and PowerPoint presentation have been mapped to the elements, performance criteria, and knowledge evidence for the unit of competency RIIMPO322E - Conduct civil construction tracked front end loader operations.

#### **Elements and Performance Criteria**

Element 1	Performance Criteria	Learner Guide/PowerPoint/Review Questions	Assessment
Plan and prepare for tracked front end loader operations	1.1 Access, interpret and apply tacked front end loader operations documentation	<ul> <li>Who has duty of care?</li> <li>Workers duty of care</li> <li>PCBU/Employers duty of care</li> <li>Australian standards</li> <li>Work health and safety legislative requirements</li> <li>Where to find health and safety information</li> <li>Question</li> <li>1, 2, 3, 4, 5, 6, 15</li> </ul>	Knowledge assessment  1 Practical assessment  1. Pre-start
		PowerPoint Workbook Question/s: 1, 2, 3, 4, 5, 6, 15, 43  • Who has a Duty of Care • Worker's Duty of Care • PCBU/Employer's Duty of Care • Work Health & Safety Legislative Requirements • The Chain of Responsibility • JSA	
	1.2 Obtain, interpret, clarify and confirm work requirements	<ul> <li>Worksite requirements</li> <li>Calculations</li> <li>Question</li> <li>7, 8, 10</li> <li>PowerPoint Workbook</li> <li>Question/s: 7, 9, 10</li> <li>Calculations</li> </ul>	Knowledge assessment 2, 3 Practical assessment 3. Complete operations to spec.
	1.3 Identify hazards and environmental issues, assess the risks and implement control	<ul> <li>Earthmoving site hazards</li> <li>Environmental management plan</li> <li>Earthmoving hazards and risks</li> </ul>	Knowledge assessment 4, 5, 6, 7, 8

	measures in line with	Decibel levels of common sounds	Practical assessment
	workplace policies	Chemicals and solvents	2. Drive and operate tracked front
		Fatigue	end loader
		Safety around trenches	
		Confined space	
		Disposing of environmentally sensitive fluid	
		Clean up	
		<ul> <li>Job safety and environmental analysis (JSEA) or Safe work method statement (SWMS)</li> </ul>	
		Overhead powerlines on poles (National Standard)	
		Overhead powerlines on towers (National Standard)	
		Question	
		17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 37, 40, 41, 42, 43, 44, 51, 96	
		PowerPoint Workbook	
		Question/s: 17, 18, 19, 20, 23, 24, 25, 28, 29, 37, 40, 42, 43, 44, 96	
		Earthmoving hazards and risks	
		Decibel levels of common sounds	
		Safety around trenches	
		Clean up	
		JSEA, SWMS	
		Overhead powerlines on poles and towers	
Element 1	Performance Criteria	Learner Guide/PowerPoint/Review Questions	Assessment
Plan and	1.4 Select and wear	Tools and equipment	Knowledge assessment
prepare for	personal protective	Question	9
tracked front	equipment required for	25, 29	Practical assessment
end loader	work activities		1. Pre-start
operations		PowerPoint Workbook	
		Question/s: 25, 28, 29	
	1.5 Obtain, identify and	Question	Knowledge assessment
	implement traffic signage	30, 31, 32, 96	10, 45, 46
	requirements according to	30, 31, 32, 30	Practical assessment
	standard operating procedures and safe work		2. Drive and operate tracked front

practices	PowerPoint Workbook	end loader
	Question/s: 30, 32, 42, 96	4. Load, unload and relocate front end loader
1.6 Select required tracked front end loader equipment and confirm suitability for work activities  1.7 Obtain and interpret	<ul> <li>Tools and equipment</li> <li>PowerPoint Workbook</li> <li>Question/s: 92, 93, 94, 96, 97</li> <li>Worksite requirements</li> </ul>	Knowledge assessment 11 Practical assessment 3. Complete operations to specification Knowledge assessment
emergency procedures for tracked front end loaders, and be prepared for fires, accidents and emergencies	<ul> <li>Emergency evacuation plan</li> <li>First aid and emergencies</li> <li>Safety plan</li> <li>Question</li> <li>11, 45</li> <li>PowerPoint Workbook</li> <li>Question/s: 45</li> <li>First aid and emergencies</li> </ul>	12, 13 Practical assessment  1. Pre-start
1.8 Coordinate and communicate planned activities with others at the site prior to commencement of work activity	Question 8, 12, 83, 101  PowerPoint Workbook Question/s: 101, 7, 8, 12	Knowledge assessment 18, 29, 30 Practical assessment 3. Complete operations to specification

Element 2	Performance Criteria	Learner Guide/PowerPoint/Review Questions	Assessment
Operate front end loader in line with established requirements	2.1 Carry out pre-start and start-up checks in line with workplace procedures	Question 33, 36, 55, 56, 57, 58, 59, 60, 62, 68  PowerPoint Workbook Question/s: 36, 55, 56, 68	Knowledge assessment 14, 15 Practical assessment 1. Pre-start
	2.2 Identify faults or defects and rectify or report within scope of own responsibility and according to workplace procedures	Question 36, 53, 54, 55, 56, 57, 58, 59, 60, 62, 65, 66, 67, 71, 107, 108, 109, 110, 111, 112, 113	Knowledge assessment 16, 17, 28, 54, 55, 56 Practical assessment 1. Pre-start
		PowerPoint Workbook Question/s: 36, 55, 56, 67, 71, 72	
	2.3 Drive and operate front end loader and modify the operating technique to meet changing work conditions	Question 13, 35, 70, 72, 74, 76, 77, 80, 82	Knowledge assessment 19, 20, 21, 26 Practical assessment
		PowerPoint Workbook Question/s: 13, 35, 70, 72,74, 75, 76, 77, 80, 82	2. Drive and operate tracked front end loader
	2.4 Monitor hazards and risks during operations, and ensure safety of self, other personnel, plant and equipment	<ul> <li>Safety around trenches</li> <li>Overhead powerlines on poles (National Standard)</li> <li>Overhead powerlines on towers (National Standard)</li> <li>Question</li> <li>21, 22, 26, 27, 28, 29, 34, 35, 37, 38, 39, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 70, 72, 73, 75, 82, 84, 98, 99</li> </ul>	Knowledge assessment 19, 20, 21, 22, 23 Practical assessment 2. Drive and operate tracked front end loader
		PowerPoint Workbook Question/s: 17, 18, 19, 20, 23, 24, 25, 28, 29, 37, 40, 42, 43, 44, 96  • Earthmoving hazards and risks • Decibel levels of common sounds • Safety around trenches • Clean up	