LEARNER GUIDE

Excavator

TICKET

Training support material for:

RIIMPO320F
Conduct civil construction excavator operations

Produced by:

EASY GUIDES
Australia Pty Ltd

Contents

Introduction to Excavator

Introduction to excavator

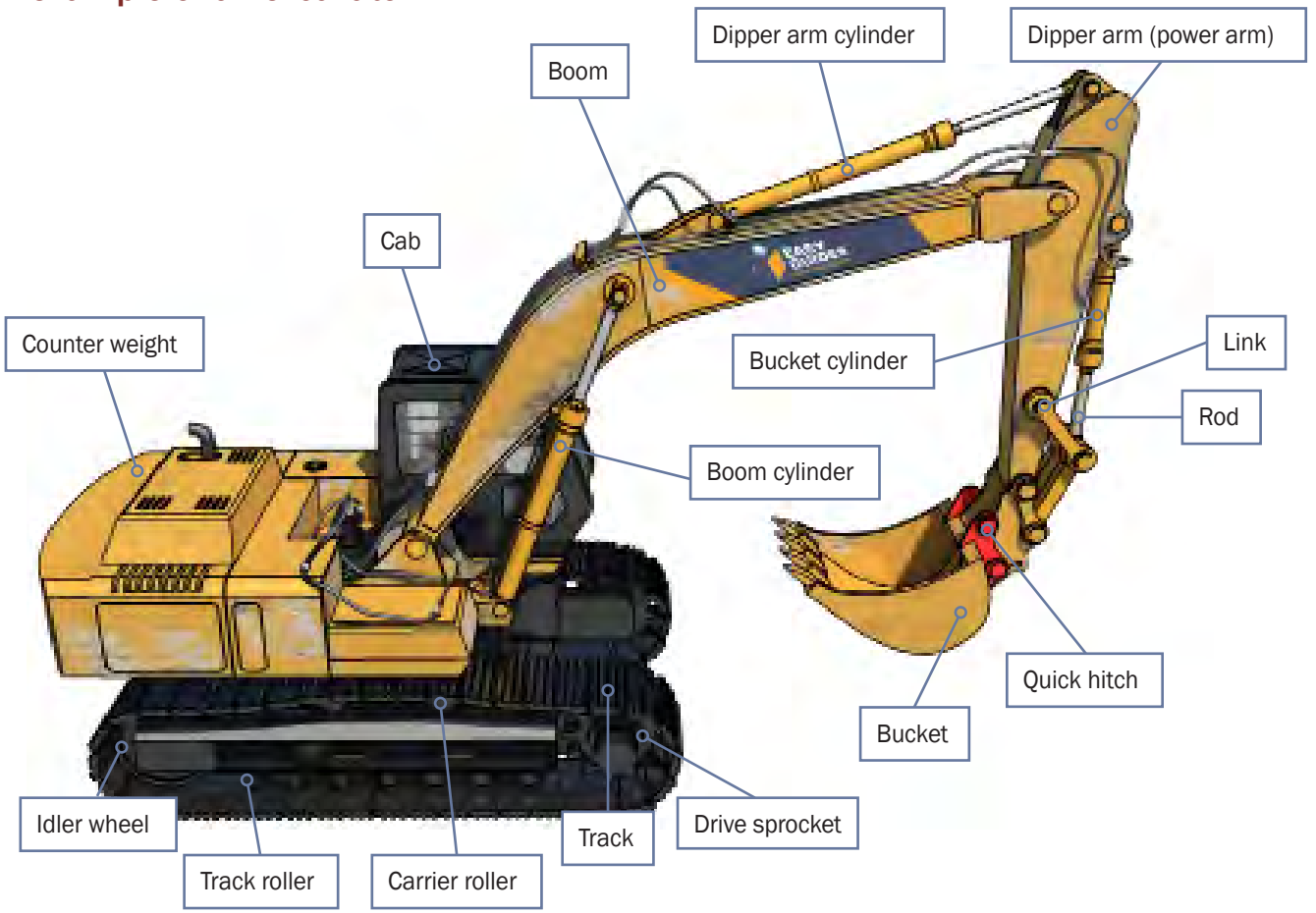
An excavator is a machine that moves on tracks or tyres. The body can slew a full 360° without changing the position of the wheels/tracks. You use an excavator to excavate (dig), lift and carry materials. If you are planning to drive an excavator on public roads, it must be registered.

What industries do you use an excavator in?

- Civil construction

- Mining

An example of an excavator



Plan and prepare for work

Chapter 1

QUESTION 11

How do you choose and set up a location for a stockpile?

Set up drainage so rainwater doesn't cause the stockpile to slide

Use well drained, firm level ground (if possible)

Clear the area of rubbish and debris

Check you have clear access to the stockpile location

Choose a location less than 50 metres from the excavation

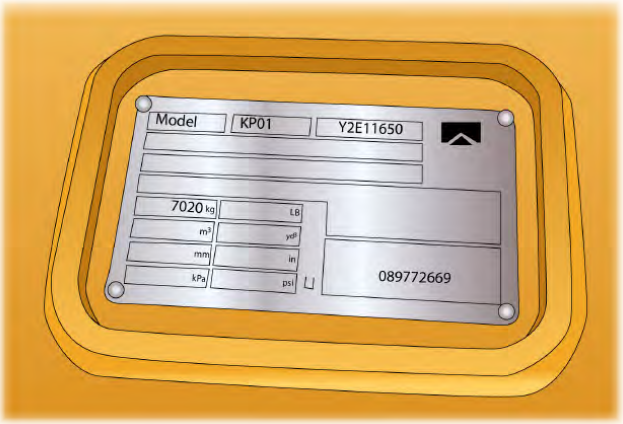
QUESTION 12

How can you find out the specifications and limits of the machine you will use?

Specifications include:

- Load capacity
- Bucket height, volume and width
- Lift height
- Dump clearance.

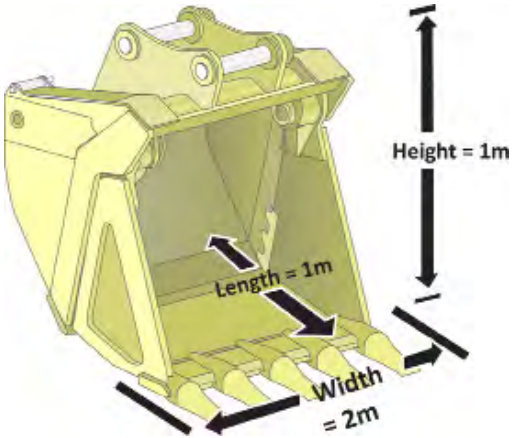
Read the operator's manual to find out the limits. The lifting capacity may also be marked on the load chart.

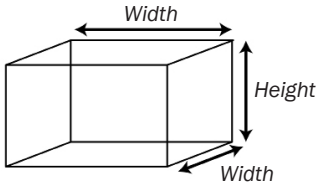


QUESTION 13

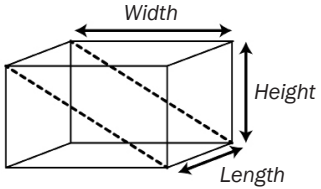
How do you find out the cubic capacity of the bucket?

$$\text{Capacity} = \frac{L \times W \times H}{2}$$





Cubic capacity of cube = L × W × H



Cubic capacity of bucket = L × W × H ÷ 2
Cubic capacity is ÷ 2 because of the shape of the bucket is triangular

Identify and control hazards

Chapter 2

QUESTION 30

What does the safety plan tell you?

The safety plan tells you how the worksite intends to meet all the safety rules. It tells you:

What personal protective equipment (PPE) to wear

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QUESTION 30

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What does the safety plan tell you?

How to use tools, plant and equipment safely

Emergency procedures and exits

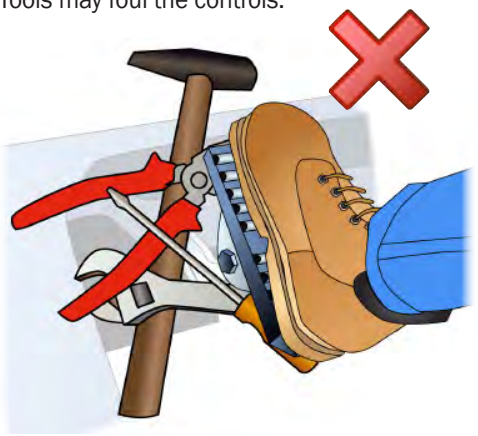
How to park safely and where to park

Control hazards and risks

QUESTION 40

Why should you keep the cabin floor clean and free from oil, grease and tools?

Tools may foul the controls.



You may slip on oil or grease.

QUESTION 41

How do you safely get in and out of the excavator's cabin?

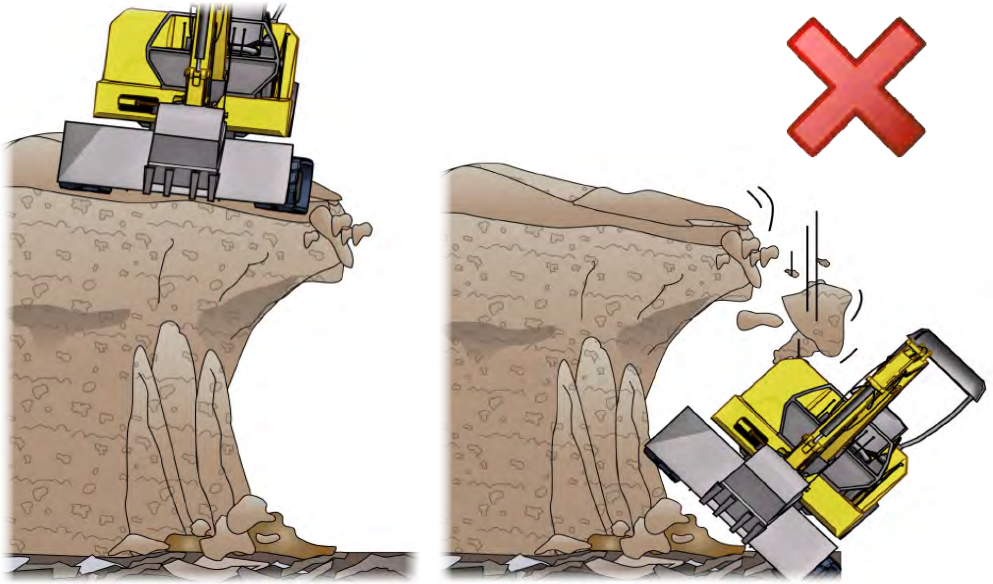
Always use three (3) points of contact facing the machine. For example, use two hands and one foot or two feet and one hand.

3 Point Contact (Both hands and foot)

QUESTION 48

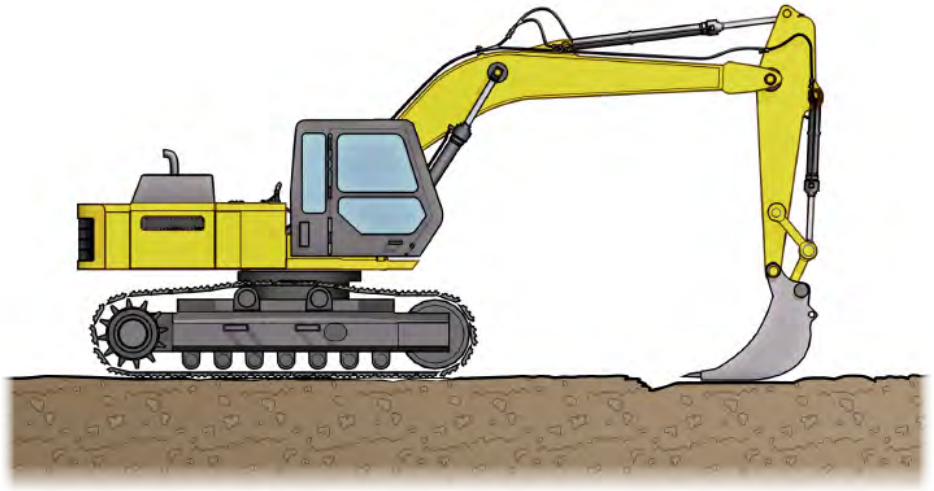
What is the danger of driving along a trench or excavation?

The excavator might tip over and fall into the trench/excavation, or the edge of the trench/excavation might cave in.



Check and monitor equipment

Chapter 3



QUESTION 63

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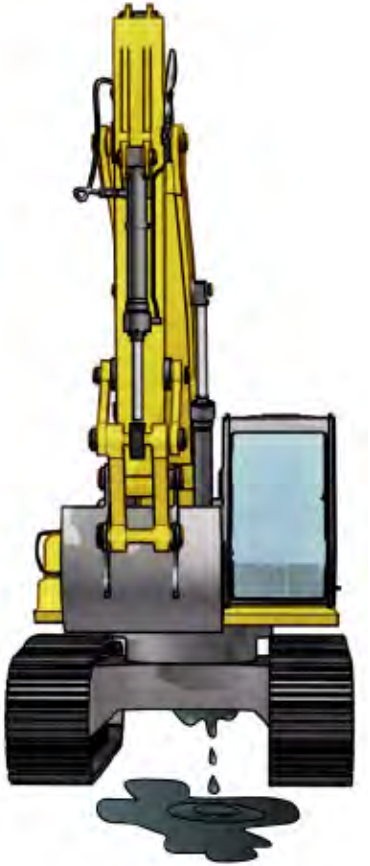
What pre-operational checks do you do before using the excavator?

Look for leaks under the machine



Check the fuel gauge to make sure the excavator has enough fuel

Check hydraulic fluid

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QUESTION 64

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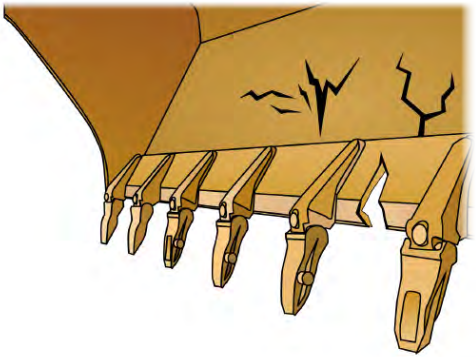
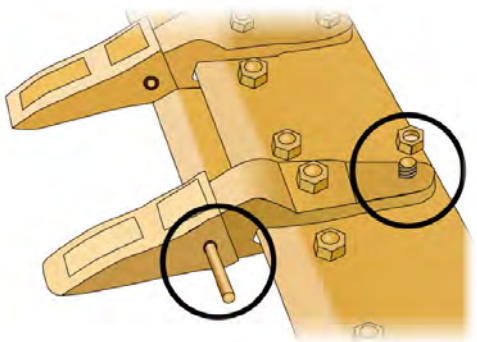
What attachment checks do you do?

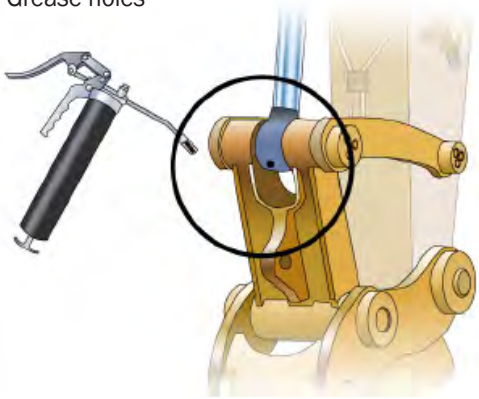
Cracks and other damage



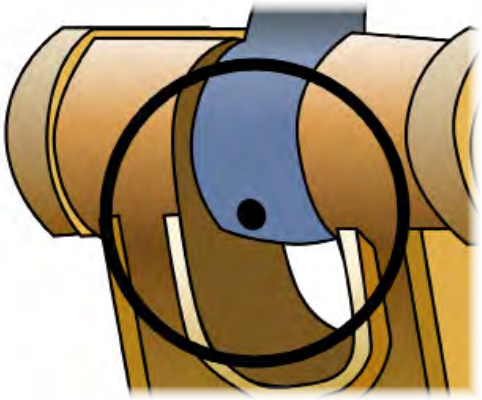
Missing pins and keepers



Grease holes



Grease nipples



QUESTION 77

When should you refuel a machine?

At the end of the day. This allows the fuel to cool quickly, reducing the amount of condensation that will be drawn from the air as the fuel cools over-night.

QUESTION 79

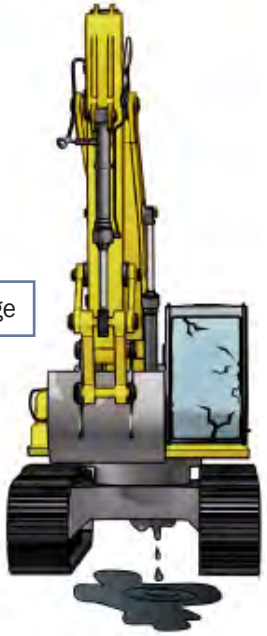
You've finished using the excavator.

What post-operational checks do you do?

Check for:

All fluid checks (once the excavator has cooled down)

Any structural damage



Any fluid leaks

You do these checks so the excavator is safe for the next person to use.

Operate/use equipment

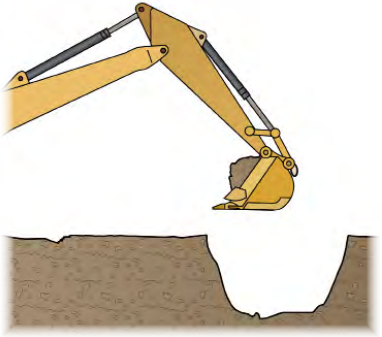
Chapter 4

QUESTION 80

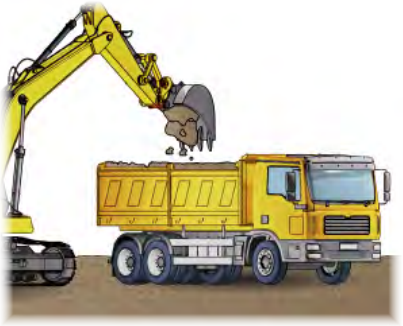
What kinds of earthmoving jobs do you use an excavator for?

You might use an excavator for:

Digging an excavation



Loading a truck



Lifting logs

Rock breaking

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QUESTION 80

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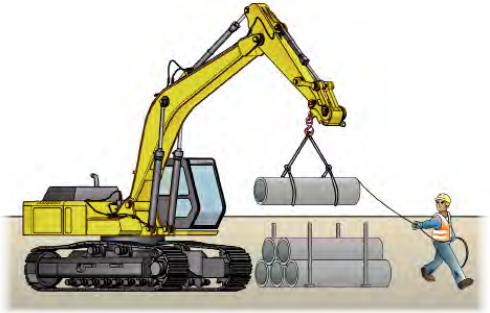
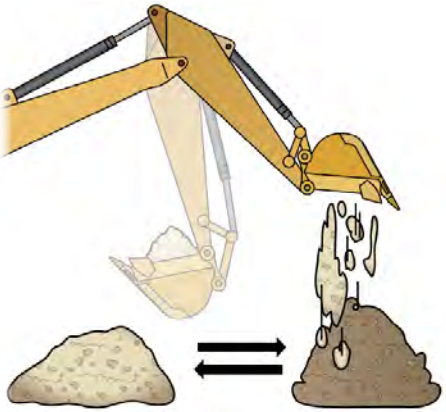
What kinds of earthmoving jobs do you use an excavator for?

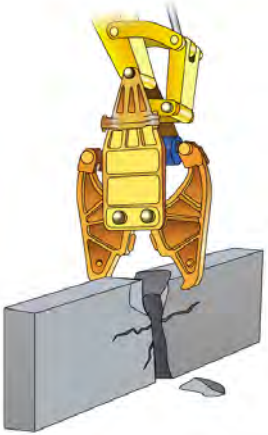
Lifting loads



Mixing soil

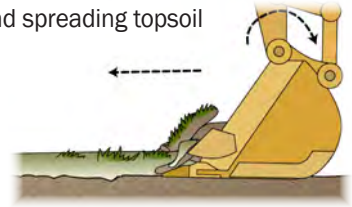


Cutting



Digging a trench

Stripping and spreading topsoil



QUESTION 82

What might happen if you undercut a stockpile, trench or bank?

It could collapse.