

LEARNER GUIDE



Roller TICKET

Training support material for:
RIIMPO317F
Conduct roller operations

Produced by:



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Introduction to Roller



Introduction to roller

A roller is also called a compactor. It's a machine with a rotating cylinder (drum) attached to smooth or compact the ground. Some rollers are towed as an attachment to another kind of machine and some have their own engine. There are roller attachments available for other machines, such as excavators, skid-steer loaders, dozers and front-end loaders. Some rollers can articulate (have joints or jointed segments) and some cannot.

Rollers are made to compact material. They do it in four different ways.

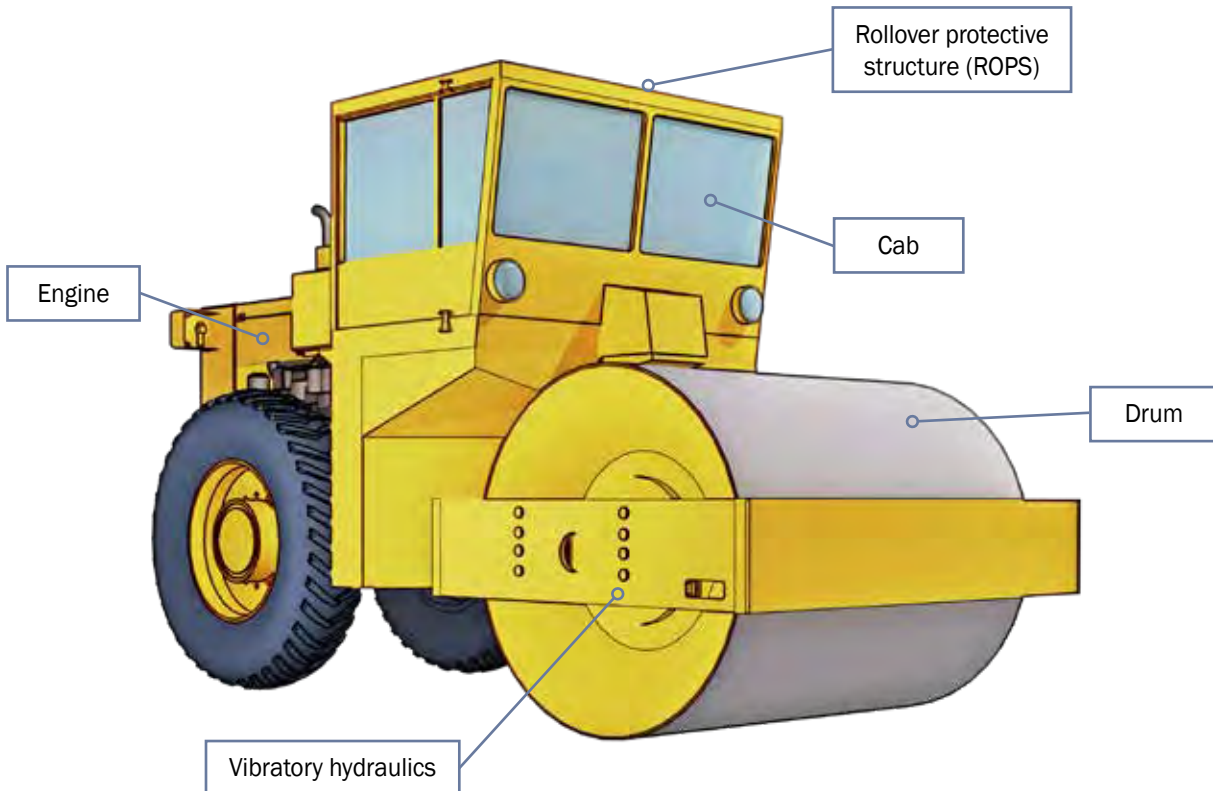
- Kneading
- Impact
- Vibration
- Using the weight of the roller only.

What industries do you use a roller in?

- Civil construction



An example of a roller



Types of rollers/compactors

Self propelled rollers

These rollers have their own engine, steering and drive system. There are many types available to do a range of different tasks.

For example:

Two sets of rubber tyres and a plain steel roller drum



Two sets of rubber tyres and a sheepfoot steel roller drum



Towed rollers

Single plain drum roller



Single sheepfoot drum roller



Combination towed rollers

There are also many types of combination towed type rollers such as:

- Multi wheeled on single axle and single steel drum towed combination roller
- Multi wheeled on single axle and single sheepfoot drum towed combination roller
- Multi wheeled on two axle and single steel drum towed combination roller
- Multi wheeled two axle and single sheepfoot drum towed combination roller.

Plan and prepare for work

Chapter 1



QUESTION 12**...CONTINUED FROM PREVIOUS PAGE**

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



Risks of using a roller near infrastructure

A roller passing over, beside or near underground infrastructure can cause damage, this damage may not be immediately visible and not cause a problem until sometime after the job is complete.

An example is the cracking of a water pipe which leaks and the water erodes away the soil supporting a road or foot path causing a cave in.

The vibrating effect of a roller greatly increases the tremor in the soil surrounding the roller drum.

The ground tremor can damage underground services such as water and gas pipes and can cause collapsing of trenches etc.

Ask the site engineer about the distance you should keep your roller away from services when using the vibrating system.

Place markers such as pegs, cones or barriers at a safe distance from the underground services. This will help remind you of the services.

