



**CONSTRUCTION**  
Training Group

# **LEARNER GUIDE**

## **Roller - LR**

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## Assessor Guidelines – Specific (Performance Assessment)

### ASSESSMENT INSTRUMENT – SPECIATIONS

The performance assessment covers the following Loadshift elements:

1.1, 1.2, 1.3, 2.1, 3.1 & 3.2

1. This assessment requires the operator to check the equipment, plan the work and to safely and competently operate the Roller

The Assessment is performed in ten sections:

- 1.1 Conduct routine pre-operational check on the Roller
  - 1.2 Inspect the site and plan work
  - 1.3 Conduct pre-operational and post start up checks.
  - 1.4 Drive to the work area.
  - 1.5 Rolls and consolidates the material
  - 1.6 Shut down equipment and secure site.
2. Prior learning & experience
    - 2.1 An applicant who produces satisfactory documentary evidence (such as a log book) which establishes 50 days of experience in the operation of a Roller does not require assessments in section 2, 3, 4 and 6.
    - 2.2 Applicant

3. The performance assessment can be conducted at any location which has:
  - Sufficient clear space to operate the machine
  - Ground suitable for rolling and consolidating material.

4. Equipment and Resources Required:
  - A Roller
  - Suitable site on which to use Roller and consolidate soil.

5. Unless other arrangements are agreed to by the assessor, it will be responsibility of the applicant, applicant's employer or trainer to provide the required equipment and resources.

6. To be assessed, an applicant must wear:
  - Safety helmet (where required)
  - Appropriate footwear
  - Other protective clothing and equipment

7. The performance of each applicant is to be recorded to the assessor's checklist.



8. Safety of personnel:  
When an applicant is working dangerously, recklessly or without the necessary co-ordination, the assessor must direct the applicant to cease work and terminate those parts of the assessment immediately.
9. The items in the shaded boxes are critical importance. Failing to get any of these correct means that the competency has not been achieved.
10. Where an applicant is assessed as 'Not Yet Competent' he/she must be informed of the reason(s) in order to gain further appropriate training.
11. The full performance assessment can take up to 30 minutes.
12. The general assessment requirements are set out in the Assessor's guidelines – general.
13. The applicant's competence in each unit is to be summarised for both performance and knowledge on the summary sheet. Competence is achieved for a unit when the required number of boxes for that unit have been ticked or marked as 'NA'.

Overall competence is achieved when competence in all units has been assessed.

## Conduct Routine Checks:

### Performance Criteria 1.1.1 and 1.1.2

#### 1. Conducts routine checks on vehicle equipment:

- Tyre condition & inflation or condition of drums and wheels

#### Checks liquid levels:

- Fuel
- Hydraulic Oil
- Engine Oil
- Battery
- Coolant

#### Checks structure for defects:

- Damaged, worn or broken parts
- Scrapers, sprinklers and mats (if applicable)
- Loose nuts, bolts
- Hoses and fittings
- Grease holes and grease pins

### PLAN WORK AND CHECK EQUIPMENT

#### Performance Criteria 1.2.1, 1.2.3 and 1.2.5

#### 2. Inspects site and plans work:

##### Identifies Hazards:

- Rough/uneven/unstable terrain
- Obstructions
- Recently filled trenching

- Soft and sloping edges

#### Access and path of movement is indicated:

- To work area
- For work

#### Appropriate equipment for the task:

- Equipment is appropriate for the task

### Performance Criteria 1.3.1

#### 3. Conducts pre-operations and post start-up checks in accordance with manufacturers specifications/operating manual

- Mounts correctly
- Adjusts seat secures safety belt
- Warning device
- Engine start
- Gauges
- Warm-up allowed
- Checks vibrator (if applicable)  
Clear for travel
- Foot brake
- Holding brake
- Steering

**SHIFT LOAD:**

**Performance Criteria 2.1.1 & 2.1.3**

**4. Drives to the work area:**

- Ensures travel direction clear
- Selects appropriate route
- Travels at safe speed

**5. Rolls and consolidates material  
(The rolling will depend on work  
and type of material being rolled):**

- On soft edges or loose material conducts first run without vibrator (if applicable)
- Changes lanes on a compacted or solid surface
- Overlaps each pass or run
- Uses an appropriate rolling pattern (kerb to crown)
- Turns off vibrator when not consolidating surface
- Safe and acceptable speed for compaction

**Performance Criteria 2.1.1, 2.1.4, 2.1.5  
and 2.1.6**

**6. General performance of sections 4  
and 5.**

- Equipment is suitable for the work
- Machine suitable for ground conditions
- Competently rolls and consolidates material
- Equipment operated at a safe speed
- signals are interpreted and observed

**SHUTS DOWN EQUIPMENT AND  
SECURES SITE**

**Performance Criteria 3.1.1, 3.1.2, and  
3.2.1**

**7. Shuts down and equipment and  
secures site:**

**Parks equipment:**

- Vibrator turned off for travel (if applicable)
- Machine parked in suitable area

**Shuts down equipment:**

- Neutralises controls
- Sets parking break
- Idles to stop and locks ignition

**Avoiding hazards:**

- Parks away from danger areas
- Removes keys

## Assessor Guidelines – Specific (Knowledge Assessment)

### ASSESSMENT INSTRUMENT – SPECIATIONS

The performance assessment covers the following Load shift elements:

1.1, 1.2, 1.3, 2.1, 3.1 & 3.2

1. Knowledge assessment for Roller is divided into three units and seventeen sections (performance criteria 1.1.1, 1.1.2 etc).
2. To satisfy the requirements for competency the applicant must correctly answer (either in writing or orally) the specified number of questions in each of the following sections:

#### Unit 1.0

##### 1.1 Conduct routine checks

1.1.1 (select 4)

##### 1.2 Plan work

1.2.1 (select 2)

1.2.2 (select 2)

1.2.3 (select 1)

1.2.4 (select 1)

1.2.5 (select 1)

##### 1.3 Check controls and equipment

1.3.1 (select 1)

1.3.2 (select 1)

#### Unit 2.0

##### 2.1 Shift load

2.1.1 (select 1)

2.1.2 (select 1)

2.1.3 (select 4)

2.1.5 (select 1)

2.1.7 (select 1)

#### Unit 3.0

##### 3.1 Shut down equipment

3.1.1 (select 1)

3.1.3 (select 1)

##### 3.2 Secure site

3.2.1 (select 1)

3. Prior learning and experience:

An applicant who holds a scraper, dozer, front end loader/backhoe, front end loader, skid steer loader, excavator, or dragline certificate and who answers questions for performance criteria 1.1.1, 2.1.2 and 2.1.5 satisfactorily is not required to complete the rest of the assessment.

4. The full knowledge assessment of thirty four questions can take up to thirty minutes.

5. The items in the shaded boxes are of critical importance. Failing to get any of these correct means that competency has not been achieved.

**CONDUCT ROUTINE CHECKS:  
Performance criteria 1.1.1 (select 4  
including 1 with a shaded box)**

1. What action would you take with any structural defects you found while conducting an external check on the vehicle/equipment?

*Report the defects to the authorised person to take action according to site procedures*

2. What should be provided on the Roller to prevent the operator from being dislodged from the seat of the roller?

*A safety belt*

3. Name three defects that you would look for when conducting a routine check on the hydraulic system of the roller.

*Hydraulic oil leaks, loose connections and hoses for splits, fractures or bulges.*

4. Why shouldn't the hydraulic oil storage tank be filled above the filled mark?

*To allow for expansion and displacement in the system*

5. What problems could be indicated by bubbles or milky engine oil in the sump?

*Water leaking into the sump*

6. When changing the battery, which battery clamp should be removed first?

*The earth battery clamp*

7. Briefly describe how you would check the air pressure of water filled tyres on a roller.

*Check with the valve at the top of the wheel.*

8. What effect would the heat from hot asphalt have on the tyre pressure of a rubber tyred roller?

*Increase the tyre pressure*

9. How would you establish the service and the frequency of the service to be carried out on the machine you are required to operate?

*By the service manual provided by the manufacturer*

10. What should be the first check of your machine at the start of your shift?

*Walk around it looking for visual defects*

11. Name five pre-operational checks that should be carried out on the loadshifting equipment before the unit is started.

*Radiator, battery, fuel, oil, hydraulic lines, tyres or tracks, structure etc.*

12. To establish if the required service had been conducted what document should you refer to?

*The log book*

**PLAN WORK:**

**Performance criteria 1.2.1 (select 2)**

13. Why should side hill travel be avoided where possible?

*There is a greater risk of turning the machine over with side hill travel.*

14. What effect would a rough or stony surface have on the operating speed of the Roller?

*It would decrease the safe operating speed of the Roller.*

15. Where a danger exists, what should be posted or positioned to warn persons of a danger?

*Warning Signs*

16. When rolling a public road where should warning signs be positioned to advise of a potential hazard or condition?

*At the approach to the work area – approximately 30m before.*

17. What should be erected where a dangerous obstruction is caused by earthworks being performed on a public road?

*Barricades*

18. How should the flow of road traffic be controlled where signs and barricades are considered inadequate to control a potential hazard?

*By a Flagman. Or by Police Officer*

19. What is the danger of rolling near the edge of unconsolidated fill?

*The edge fill may collapse*

**Performance criteria 1.2.2 (select 3 including 1 with a shaded box)**

20. Under what conditions should a roller operator wear respiration equipment?

*Where there is a health risk to the operator from dust or contamination in the air.*

21. When should ear protection be worn?

*When the noise could contribute to the loss of hearing*

22. If there is a likely hood of the roller being overturned, what must be provided on the roller to protect the operator?

*A roll over protective structure and safety belts*

23. When should a person wear a safety helmet?

*Where the person could be struck on the head*

24. What is the minimum type of footwear that an operator should wear to operate loadshifting equipment?

*Non-slip footwear that encloses the foot*

**Performance criteria 1.2.3 (select 1)**

25. which is the preferred route of travel, diagonally across or directly down a sloping surface?

*Directly down a sloping surface*

26. Why shouldn't a gear change be made while driving a heavy roller up a steep sloping surface?

*If the gear change was missed, the heavy roller may not be able to be safely controlled*

27. What gear should be selected to travel down a steep sloping surface?

*A low gear. The gear required to climb the sloping surface.*

**Performance criteria 1.2.4 (Select 1)**

28. In hazardous working areas where permission is required to work, what must the operator ensure before the work is commenced?

*That the required permits have been obtained*

29. What is required to be obtained before unregistered rubber tyred roller is driven along a public road?

*An unregistered vehicle permit*

30. What government licence do you require to drive a rubber tyred roller on the road?

*A class licence for plant up to 4.5tonnes or other jurisdiction as applicable. Eg: Australian Heavy vehicle licence.*

**Performance criteria 1.2.5 (Select 1)**

31. Name three types of rollers

*Static rollers, vibratory rollers and multi rubber tyred rollers*

32. How does a vibrating roller compact the surface?

*By the rollers weight and the rolling and vibration of the roller drum*

33. How does a static roller compact the surface?

*By the rollers weight and the rolling of the roller drums or wheels*

34. How does a multi rubber tyred roller compact the surface?

*By kneeling the material with the weight of the roller and rolling of the tyres*

**CHECK CONTROLS AND EQUIPMENT**

**Performance criteria 1.3.1 (select 1)**

35. On the post start-up check you notice a bulge form in a hydraulic hose. What action should you take?

*Switch off machine and have the hose replaced*

36. When should tests, checks and inspections be made by the operator on the loadshifting equipment that is to be operated?

*Daily, before use*

**Performance criteria 1.3.2 (Select 1)**

37. What action would you take with damage and defects found on the machine?

*Report the damage and defects to the authorised person or to site requirements and refrain from operating if a danger exists.*

**SHIFT LOAD**

**Performance criteria 2.1.1 (Select 1)**

38. What is used or provided to prevent the hot asphalt from sticking to the roller drums?

*Scrapers, Water Sprinklers and Mats*

39. When using vibratory roller what procedure should you adopt for the first run against the kerb on uncompacted soil?

*Slowly and without the vibrator*

40. In relation to the weight of a roller what advantage does a vibratory roller have?

*Greater compaction ability for its weight*

**Performance criteria 2.1.2 (Select 1)**

41. What effect would leave the vibrator of the roller on while the machine is stationary on soil?

*The roller would vibrate itself onto into the soil*

**Performance criteria 2.1.3 (Select 3 including 1 with a shaded box)**

42. Which of the following directions should rolling be performed on a large sloping surface, across, diagonally across, or up and down the sloping surface

*Up and down the sloping surface*

43. Is it permissible to carry a passenger on the roller?

*No*

44. As an operator would you leave an unattended roller engine running?

*No*

45. On a road where should the rolling commence from? The crown or left or right of crown, or the kerb side?

*The kerb side*

46. How would you establish the capabilities and limitations of the equipment?

*By information provided by the employer and documented by the manufacturer*

47. Before reversing a machine what precaution should be taken?

*Ensure the direction of travel is clear*

48. What happens if too much water is used on the soil being rolled and compacted?

*Rolling would bring the excess water to the surface and prevent the soil from being compacted properly*

49. If cracks appear after rolling with a vibrator roller, what procedure should be adopted to remove the cracks?

*Perform runs without the vibrator to remove the cracks.*

50. What rolling pattern should be adopted for the runs on a road?

*The runs should overlap the previous runs*

51. Would you coast the roller downhill?

*No*

52. When rolling with a vibratory roller, what should be done before the roller is stopped?

*The vibrator on the roller should be turned off*

53. What direction would you approach and how would you cross a ditch?

*At an angle and slowly*

54. When travelling what would you do before travelling down a steep grade?

*Reduce speed with service brake and select the appropriate gear for the grade*

**Performance criteria 2.1.5 (Select 1)**

55. (ORAL) Applicant to state the meaning of the hand signal of 'stop' demonstrated by the examiner

*Stop*

56. State the meaning of the illustrated diagram

*Stop*

**Performance criteria 2.1.7 (Select 1)**

57. While operating the roller what action would you take if a hydraulic hose sprung a leak?

*Have repairs carried out. Replace hose*

58. What actions would you take if a vibratory roller near a bank started to slide?

*Immediately stop the vibrator and idle the engine. Get help if it is not possible to drive or reverse out slowly*

59. If the roller has insufficient power to climb the hill in the gear that was selected, what action should be taken?

*Reverse down the hill and select the correct gear to climb the hill*

**SHUT DOWN EQUIPMENT**

**Performance criteria 2.1.7 (Select 1)**

60. Name three areas where you would not park a roller

*Access ways, near overhangs, refuelling sites, tidal or flood areas, adjacent to an excavation*

61. Where possible what type of surface should be selected to park the roller on?

*A level surface*

62. Which direction should the roller face if it has to be parked on a sloping surface?

*Across the slope*

**Performance criteria 3.1.3 (Select 1)**

63. How would you remove the radiator filler cap of a roller that has not completely cooled off?

*Slightly loosed cap to release pressure and then slowly remove cap*

64. What post-operational checks should be carried out by the operator on the loadshifting equipment to prepare it ready to be reoperated?

*Check the structure and equipment for defects and wear and the oil, fuel and water levels*

**SECURE SITE**

**Performance criteria 3.2.1 (Select 1)**

65. What shall be provided when a roller has to be parked on or protrudes onto an access way?

*Barricades, lights and signs*

66. For what reason should the key be removed from the ignition of the machine?

*To prevent unauthorised movement*

Unit	Form of assessment	Total number of boxes in the assessment	Number of boxes given or NA	Number of boxes required to meet standard	Were all critical boxes given or NA?		Assessment standard requirements achieved *		
					Yes	No	Yes	No	
1	Performance	33		29	Yes	No	Yes	No	
	Knowledge	13		8	Yes	No	Yes	No	
	Assessment completed within time allowed							Yes	No
2	Performance	31		28	Yes	No	Yes	No	
	Knowledge	5		3	Yes	No	Yes	No	
	Assessment completed within time allowed							Yes	No
3	Performance	11		9	Yes	No	Yes	No	
	Knowledge	3		2	Yes	No	Yes	No	
	Assessment completed within time allowed							Yes	No

\*Performance standard = Number of items required to meet standard (including all critical boxes)

Knowledge standard = Number of questions required to meet standard (including all critical boxes)

### Summary

Candidate is:

**COMPETENT**

**NOT YET COMPETENT**

Date: \_\_\_\_\_

Name of Assessor: \_\_\_\_\_ Signature: \_\_\_\_\_

Name of Candidate \_\_\_\_\_ Signature: \_\_\_\_\_

Comments/feedback:

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