



**CONSTRUCTION**  
Training Group

# **LEARNER GUIDE**

## **Asphalt Paver (AP)**

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# **Asphalt Paver Safety**

## **Part One**

### **PERFORMANCE ASSESSMENT**

## Unit 1 Conduct Routine Checks:

### 1. Routine checks on paver: (Checks at least 12)

- Lift systems
- Explain safety decal and warning devices
- Tyre condition, wheel nuts and pressure
- Engine Oil
- Hydraulic Oil Level
- Transmission Oil
- Battery security, water level and cleanliness
- Brake fluid
- Coolant
- Steering
- Demonstrate bleeding of fuel system
- Seat adjusted and clean
- Seat Belt (condition and security)
- Mirrors adjusted and clean
- Overhead Guard (condition and security)

### 2. Identify Hazards (Checks at least 8)

- Bridges
- Ground condition
- Services
- Surrounding Buildings
- Obstructions
- Other equipment in area
- Personnel in area
- Dangerous materials
- Railway lines
- Other hazards unique to the workplace
- Applicant immediately removes hazards, or ensures hazards are eliminated by instigation appropriate action.

## Unit 2 Shift Load:

### 3. Applicant operates paver (Checks at least 21)

- Assess the site before paving
- Follows and maintains agreed travel plan/path
- Ensures travel direction is clear
- Gives way to other traffic before moving off
- Maintains a safe distance from other vehicles
- Travels at a safe speed
- No mishaps when operating
- Where paver goes undetected by others, operator takes appropriate action by stopping or slowing vehicle, sounding horn or flashing lights
- Looks in direction of travel; if reversing, looks over both shoulders before paver moves
- Does not travel until screeds are adjusted to safe height
- Travels in reverse if site is obscured, and must constantly look in the direction of travel
- No object in the path of mower it hit or knocked over
- Operator keeps all parts of body within the paver when travelling. However when manoeuvring, the operator may lean out for a clearer view
- Correct controls are selected
- Operation of controls is smooth
- Whilst manoeuvring in a confined area, the applicant shunts or repositions paver to access the area
- Screeds are correctly positioned relative to paver task
- Explain or demonstrate paver techniques working to a pattern
- Operating speeds, overlap joints
- Avoiding curbing, need to be aware of other plant/personnel
- Need to be are of debris which could cause damage to paver

- While travelling, the screeds are high enough to clear any bumps or rises on the ground
- Explain or demonstrate the use of battery jumper leads
- During travel, the operator keeps looking in the direction of travel
- Travels at a safe speed and maintains safe control of paver
- Operator does not alight from paver until it is safely parked and turned off
- Explain or demonstrate procedure for loading and securing the paver onto a float or trailer
- Applicant explains correct use of the park brake when on an incline, as per the manufacturers recommendations.

### Unit 3 Shut down equipment:

#### 4. Shuts down equipment and secures site (Checks at least 4)

- Parks equipment in a suitable location away from danger areas
- Lowers attachments to ground
- Appropriate gear, relevant to the paver transmission type, is selected when parking vehicle
- Applies parking brake
- Idles down before engine is turned off
- Engine/power is turned off
- Position of equipment and positioning of steering correct
- Batteries are checked.

### Secure Site:

#### 5. Secures Site (Checks at least 6)

- Power lines
- Inclined surfaces
- Next to open excavations
- Access ways
- Walkways
- Fire/emergency exits
- First Aid facilities
- Refuelling sites
- Blind corners
- No less than two metres from nearest railway track
- Flood areas
- Removes keys
- Dismounts correctly.

# **Asphalt Paver Safety**

## **Part Two**

### **ORAL/WRITTEN ASSESSMENT**

**Unit 1**
**Element 1.1**
**CONDUCT ROUTINE CHECKS:**

1. Before starting the paver each day, what should you do?  
*Perform a pre-start check.*
2. Before starting the engine, what should you know?  
*The correct shutdown procedures*
3. You are required to inspect your paver before use. Name at least four liquid levels that would form part of your inspection?  
*Hydraulic Oil, Engine Oil, Cooling Water, Fuel, Battery electrolyte level in each cell.*
4. You are required to inspect your paver before use. Name at least four parts which would form part of your inspection?  
*Brakes, Steering, Controls, Lights, Warning Devices, Tyres, Security of Attachments*
5. What precautions should be taken by the operator when a leak in the fuel system is detected?  
*Shut down machine and remove keys, fit 'Do not operate' tag, then report to an authorised person and have repairs carried out. (Isolate fuel is possible)*
6. What should be fitted to the paver to warn others of its movement?  
*A flashing warning light and a reverse beeper.*
7. Why should steps and grab rails be free from oil, grease and mud?  
*To stop injury from slips and falls*
8. What hazards would you expect to find on your worksite?  
*Powerlines, other equipment, personnel, unstable ground, vehicle traffic, weather, inclined surfaces, hot asphalt, obstructions*

9. How would you mount and dismount a paver?  
*By using '3 points of contact'*
10. Where should the operator remain during the operation?  
*The operator should remain seated at all times.*

**Unit 2**
**Element 2.1**
**Drive Machine**

11. Should the paver be registered and insured before driving it on a public road?  
*Yes, at all times*
12. How should the paver be driven around the job site?  
*Slow and steady, Give right of way to loaded machines, Travel slow over rough or slippery ground, Obey all site speed limits, Travel in the direction indicated.*
13. List the steps in preparing the paver to be driven on the road?  
*Raise the hopper wings and secure, Clean all paving material from paver, Raise screed as high as possible and lock in position.*
14. Why should you avoid soft edges or uncompacted ground?  
*The ground could collapse and cause damage to the surface or cause the machine to be damaged.*

**Element 2.2**
**Operate Machine**

15. To stop the machine from getting stuck on services, what would you do?  
*Build ramps around them by hand.*
16. When working on a job site, what do you have to do in regards to safety?  
*Follow all site rules, polices, procedures and safety signage*

17. When should hearing protection be worn by the operator?

*When at risk of hearing damage (85dB)*

18. When should an operator wear a helmet?

*When at risk of being struck on the head*

19. How is the screed connected to the paver?

*By the two side arms*

### Element 2.3

#### Spread Materials

20. Before crawling under the screed to check the angle of attack, what must you do?

*Make sure that it is properly blocked or chocked to stop it descending*

21. What is the purpose of a material level indicator?

*To let the operator know that there is an adequate amount of material in the machine*

22. If the flow gates need adjusting what must you do?

*Turn off the feed system.*

23. Before lighting the screed heaters, what must you do?

*Read and understand the manufacturers operating instructions*

24. What is the recommended time to turn off the burners so they do not damage the screed?

*For no more than 10 minutes*

25. What can happen to the mat if there is excessive head of material?

*It could get ripples, long waves, increased depth and less density.*

26. How far should you travel before checking the depth of the mat?

*About 10 metres*

27. Describe three things that cause the mat to bleed?

*Excessive moisture in the mix*

*Excessive vibration, and*

*If the tack coat is placed too thick*

28. What is the smallest diameter recommended for a string line to be used for the sensors?

*2mm*

29. When moving the machine your visibility is restricted, what must you do to move safely?

*Have a competent person guide you*

30. What can cause the trailer/float bed to become slippery?

*Dirt, gravel and oil*

31. If when transporting the machine it is wider than the allowed regulations, what must be placed on the transport vehicle?

*Warning signs "wide load" etc*

32. Where must the operator be when the paver is working?

*They must remain at the operators station at all times*

33. What must the operator check for when loading the hopper?

*That all personnel are clear*

#### **(Select 3 from 34-37)**

34. Before a job starts, what should the operator know?

*The operator should learn as much as possible before starting work*

35. If someone on the job receives a minor asphalt burn, what should you do?

*Cool the affected area with water immediately and get the victim*

*medical treatment as soon as possible.*

36. When parking the machine over night and it could hazard, what must you do?

*Provide barricades, warning signs and lights.*

37. Where would you not park your paver at the end of the day?

*Under powerlines  
On an access way  
In front of fire fighting equipment  
In a flood area  
Next to an excavation  
On an incline*

38. What would the operator do when performing a post operational check on the paver?

*Check the structure for damage and defects, tyres, fuels, oils and water levels*

39. If at the end of the day you notice a fault with the paver, what would you do?

*Shut down machine and remove keys, fit 'Do not operate' tag, then report to an authorised person and have repairs carried out.*

40. If the machine is turbo charged, how long should you let it idle before turning the engine off?

*3 to 5 mintues*

## ORAL/WRITTEN ASSESSMENT

OPERATIONAL AREA UNIT	NUMBER OF CRITICAL CRITERIA REQUIRED	NUMBER OF CRITICAL CRITERIA ACHIEVED	NUMBER OF NON-CRITICAL CRITERIA REQUIRED	NUMBER OF NON-CRITICAL ACHIEVED
1	4		8	<input type="text"/>
2	7		13	<input type="text"/>
3	2		3	<input type="text"/>

Oral/Written Assessment completed within time allowed – approx 1.5 hr

OPERATIONAL AREA UNIT	NUMBER OF CRITICAL CRITERIA REQUIRED	NUMBER OF CRITICAL CRITERIA ACHIEVED
1	2	<input type="text"/>
2	1	<input type="text"/>
3	2	<input type="text"/>

Performance Assessment completed within time allowed – Approx 1 hr

Is the Candidate Competent? (Circle)      Yes      No

## PERFORMANCE ASSESSMENT

### Summary

Candidate is:

**COMPETENT**

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

**NOT YET COMPETENT**

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

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

Comments/feedback:

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\* 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)