

Loaders, Trucks & Transportation Controls

1) List 5 causes of mobile equipment accidents.

2) Define “adequate maintenance”?

3) Which of the following items should Vehicle Operator Training include:

- a) How to paint the vehicle
- b) How to do a thorough pre-shift inspection
- c) Exactly what to do and who to contact when vehicle defects are identified
- d) What to do when an unusual noise is heard
- e) What to do when vehicle operation feels different than usual
- f) Instructions on how to use the various controls, practice and feedback on performance
- g) Information from the operator’s manuals
- h) Identification of hazards and correct operating procedures associated with each step in the typical work cycle

4) List one thing that indicates equipment is traveling at excessive speed.

5) Give 3 examples of distraction that may result in an accident?

6) Give 5 examples of an inadequately-maintained road!

7) Name 3 types of traffic control signs:

8) List 2 things that would be included in improper road design.

9) What is the recommended safe way to dump a load on top of a pile?

10) What are the 2 main things a berm should do?

11) List 3 precautions you could take to help ensure that a dump truck would not turn over while dumping.

12) What are the main causes of a loader overturning?

13) What is the first thing you do when entering the area where a loader is working?

14) Where should smaller vehicles not park?

15) Where should larger vehicles not park?

Answers (Some 'list' questions may have more answer than are listed here.)

- 1) Mobile equipment accident causes:
 - a) Inadequate vehicle maintenance
 - b) Inadequate training
 - c) Excessive speed
 - d) Inadequate road maintenance (holes, humps, rocks, dust)
 - e) Inadequate traffic controls, signs, etc.
 - f) Poorly designed roads (steep grades, intersections on hills or blind curves, road not wide enough)
 - g) Inadequate berms
 - h) Dumping over edges
 - i) Dumping under powerlines
 - j) Dumping on unstable ground or on grades
 - k) Dumping consolidated material
 - l) Loader travel with bucket raised
 - m) Roads too narrow

- 2) "Adequate Maintenance" = Regular preventive maintenance as recommended by the manufacturer & correction of all problems identified in a thorough pre-shift inspection by a correctly-trained operator

- 3) bcdefgh

- 4)
 - a). Faster than posted speed
 - b) Too fast to maintain complete control under the conditions (road surface, hills, curves, visibility, vehicle load/condition, etc.)
 - c) Too fast to stop within the distance that the operator can see (sight distance).

- 5)
 - Adjusting the radio
 - Smoking or eating
 - Phone use
 - Daydreaming or dozing off
 - Turning eyes from the road to look at something else (including signs)

- 6)
 - Excessive dust
 - Holes or washouts
 - Large rocks
 - Inadequate berms
 - Bumps
 - Muddy areas
 - Snow or slush on road

- 7)
 - Information signs
 - Stop signs
 - Speed limit signs
 - Do not enter signs

Warnings of unusual hazardous conditions (mud, water, ice, steep grades, blind intersections, narrow road, sharp curves, traffic changing from right to left and back, merging overhead traffic lines)

- 8) Free space between vehicle and road edge or another vehicle is less than $\frac{1}{2}$ the vehicle width.
Blind intersections on hills or curves
- 9) Dump back from the edge using a dozer to push the material over
- 10) Mark the edge
Help operator steer back onto the road

Most berms in the nation's mines are constructed of a soft material. The first thing a tire does when it goes into this earth berm is to sink in. Tests have shown that, to stop a runaway vehicle, for an 85-ton capacity vehicle or less you would need a berm height of three times the axle height. For trucks larger than 85 ton, you'd have to have four times the axle height. This means that for trucks larger than 85 ton, if the axle height were 6 feet, we'd need a $6 \times 4 = 24$ -foot-high berm to stop a runaway truck. Such a berm would be about 48 feet wide at the base because of the angle of repose for earth berms. This shows how impractical it would be to provide berms that could stop runaway vehicles.

- 11) Level surface
Solid ground
Tailgate open
Loose material being dumped
- 12) Moving with the bucket raised
Dumping on ground that isn't level or stable
- 13) Get the operator's permission before you enter and have the operator guide you as to where to park or stand
- 14) In the blind area(s) of moving or parked vehicles
- 15) Where they cannot see smaller parked vehicles from the driver's seat.