

Mobile Equipment:

- **Parking; Chocking, Blocking**
- **Roads and Berms**
- **In The Pit**
- **General Operation**

AR Training

Updated 2012

DMME

Division of Mineral Mining

Pre-Operational Inspection

4 VAC 25-40-145

- Performed by the equipment operator prior to use each shift.
- Defects must be reported to the certified foreman.
- Serious defects must be corrected prior to use.



Equipment operator's inspection check list.

Typical Pre-Op Inspection Items

- Tires, drive line, hoses, ladder steps, glass, mirrors, and fire extinguisher.
- Brakes, steering, gauges, horn, back-up alarm, lights, and seatbelt.
- All equipment must be maintained to the manufacturer's specifications.



Tagging Defective Equipment

- Equipment with defects that cannot be repaired before use must be tagged out of service with a warning sign.



Repairs or Maintenance

4 VAC 25-40-1685



Repairs and maintenance shall not be performed on mobile equipment until the power is off and it is tagged out.

Repairs or Maintenance (cont.)

4 VAC 25-40-1685



Mobile equipment shall be blocked against hazardous motion.

Fatal Accident

June 2006

- The loader operator was killed when the unsupported bucket assembly fell as he was replacing a leaking hose.



Parked or Unattended Equipment

(4VAC25-40-1510)

- Mobile Equipment shall not be left unattended unless the brakes are set.



- Equipment with wheels or tracks, when parked on a grade, shall be either blocked or turned into a bank or rib unless the bucket or blade lowered to the ground prevents movement.

Do These Comply?



Give That Man A Cigar!



DMM Haul Road Requirements

- Stable bench or ramp used as road.
- Adequate width for size of equipment.
- Safety berms on outer edge of elevated roads capable of “restraining” largest vehicle in use in the area.
- Avoid head-on approach to wall or bench.
- Beginning of shift examination by certified foreman.

Haul Road Berm Requirements

4VAC25-40-1410

- Berms or guards required on outer bank of elevated roadways.
- Berms must be capable of stopping & holding (restraining) largest vehicle in use; or deflecting the out-of-control vehicle back onto the road.

When Safety Berm Required

Unsafe ramp to feed hopper!

- Elevated roadways where drop-off hazard could cause an accident.



3 Factors For Height Of Berms

- Size of vehicles.
- Speed of vehicles.
- Grade of ramp or road: how steep?



A change in any of these factors requires a re-evaluation of the berms!!

Will These Do The Job?



Safety Berms Protect Miners & Mine Equipment

- Certified foreman must inspect haul roads & safety berms during pre-shift inspections of pit, plant, and stockpiles.
- Mobile equipment operators must check berms upon arrival at work areas.
- Properly constructed & maintained berms protect company assets; employees and equipment.

Haul Road Maintenance

- Keep road surfaces free of water, debris, or spilled material by use of motor grader or front-end loader (4VAC25-40-1530).



Controlling Dust

4 VAC 25-40-740/1400



- **Sources of dust must be wetted down unless controlled by other measures such as dry collection systems.**

Inclement Weather Operations

- Slow down.
- Turn lights & wipers on.
- Be alert for road hazards.



Haul Road Hazards

4VAC 25-40-1530

- Roads must be examined by foreman prior to use each shift.
- Hazards such as ice, snow, high water, or spilled rock must be removed.



Hazardous, icy, quarry ramp.

Pit Employee's Responsibilities

- Upon completion of your pre-operational inspection of your mobile equipment, examine your work area to ensure safe working conditions: stable bank for excavator, sloped pit banks, safety berms, etc. (4VAC25-40-460).
- Make frequent checks throughout the shift.



Any unsafe condition must be corrected, or reported to the foreman!

Pay attention to what you are doing!



- Persons must not work in areas where walls, benches or banks are unsafe,
- or where they may be trapped from falling material.
- or where their equipment could go over the bank!!!

4 VAC 25-40-470

Keep Bench Heights Consistent With Reach Of Equipment



Loose rock can be scaled from face, and pit bank can be sloped.

Use Of Excavator In Pit

- Pit bank height should not exceed reach of the excavator.
- Pit banks must be kept sloped to the “angle of repose” to ensure ground stability.



S&G Mine Excavator Accident



Operator was able to escape by kicking window out!

Mobile Equipment Safety Starts With Proper Task Training

- Operators must be trained in equipment manufacturer's safe operating procedures, applicable DMM safety regulations, and company safety rules (4VAC25-40-100).



When Mounting Equipment, Check Grab-Irons & Handrails

- Many accidents involve falls from equipment.
- Hands must be free for climbing.
- Always maintain 3 points of contacts to avoid accidental fall.



Sound Warning Prior To Starting And Moving Equipment

(4 VAC 25-40-1340)

Equipment operators must be certain, by audible signals or other means, that all persons are clear of the equipment before starting or moving it.



Safe Operating Procedures

- Maintain control of equipment (4VAC25-40-1430).
- No passenger outside truck cab (4VAC25-40-1460).
- Stay alert to changes in work environment.



Riding outside of operator's cab prohibited (4VAC25-40-1460.4).

Extraneous Materials In Cabs

4 VAC 25-40-1380

Cabs of mobile equipment should be kept free of extraneous materials, such as bottles, loose equipment, papers, etc.



Service Brakes On Mobile Equipment

4 VAC 25-40-1320



Service brakes shall be adequate to stop and hold the equipment while loaded on the maximum grade traveled.

Test during pre-operational inspection prior to use each shift.

Securing Equipment In Travel Position

4 VAC 25-40-1470



When traveling between work areas, mobile equipment must be secured in its travel position.

Be Alert To Other Activity

- The F-E loader operator may not see you in a small skid-loader below the feed hopper!



Lift Trucks

4 VAC 25-40-2670



- Keep load in a low position.
- Keep load behind when descending a grade.

MOBILE EQUIPMENT

The “Basics” Prevent Accidents

- Equipment kept in safe condition by means of “pre–operational inspections”
- Defects corrected or equipment removed from service if unsafe
- Trained / authorized operators using equipment for designed purpose
- Repairs & maintenance performed with power off and machine blocked against motion

MOBILE EQUIPMENT

The “Basics” Prevent Accidents

- Warning Devices kept operable and operators signaling before moving equipment.
- Seat Belts used – ROPS are of no value if belts in equipment are not used.
- Operate equipment in safe manner according to task training, manufacturer’s guidelines and conditions.
- Ensure work environment where equipment will be used is free of safety hazards.