SAFETY MATTERS

Ditch Witch® SAFE

Safety Matters is intended to promote discussions of safety issues among underground construction professionals. You should always read and understand the operator's manual before operating any equipment. For additional information, please e-mail safety@ditchwitch.com.

TOPIC:

Working On Inclines

POTENTIAL HAZARDS

- Struck by
- Fire
- Rollover
- Crushing
- Slips, trips and falls

PRECAUTIONS

- Only operate equipment on inclines if absolutely necessary and only after a risk assessment deems the slope and conditions are conducive to a safe working environment.
- Perform a risk assessment on each slope to determine if factors affecting risks (see Information/Facts) create an unsafe condition.
- Never work on an incline during rain, sleet or snow. Never work on an incline with ground that is saturated with water.
- Travel only up and down a slope. If operating across a slope cannot be avoided, swing all attachments toward the uphill side and lower them as much as possible.
- Avoid turning on slopes.
- Loads should never exceed rated operating capacity of the equipment, especially on slopes. Loads may need to be less than rated operating capacity when working on slopes.
- Keep attachments or loads low to the ground.
- Always dump a bucket or lift loads onto a truck on level ground.
- Travel with heaviest end of equipment uphill. This may vary depending on carried loads. If there is no heavy end or if operation is from the side, the operator should remain on the uphill side of equipment.
- For seated equipment, always have rollover protective system (ROPS) in place when working on an incline. Always wear a seatbelt with a ROPS.
- Travel slowly and make small, cautious adjustments only if necessary.
- Read equipment or engine specifications to determine maximum operating slope for the engine lubrication. (Note: this must NOT be considered the safe operating slope for the machine.)

INFORMATION/FACTS

Factors affecting the risk for a particular slope:

- Ground conditions—loose soil, rough terrain, wet soil, etc. all reduce traction and can result in loss of stability.
- Condition and design of equipment—type, condition and inflation of tires, tracks, suspension, etc. Tracks typically provide more traction than tires. Over-inflated or solid tires can create a rougher ride contributing to loss of stability. Worn tires may not provide adequate traction. Under-inflated or soft wall tires can roll out on a side slope and increase the chance for a tipover.
- Height of attachments—attachments can raise or lower the center of gravity quickly. Keep them as low as possible.
- Proper counterbalance—equipment should have proper counterbalance for operation on flat ground. If not properly counterbalanced, a tip over is more likely to occur on an incline.
- Appropriateness of equipment for the work being performed —especially on an incline, it is imperative that the right equipment be used for the job. Do not improvise.
- Operator expertise—Operator experience and familiarity with equipment typically leads to more knowledge of operating on slopes and better reactions to situations that may arise.

TALES FROM THE TRENCH

- An operator was driving a trencher on a slope on the downhill side of the machine. The operator increased the machine speed and the front of the trencher rose up and turned over backward on top of the operator. There was no time to get out of the way. He broke his pelvis, his leg and his ankle.
- A compact tool carrier with a bucket was being used on a steep side slope. The machine over turned. The operator jumped clear, but the machine caught on fire and caused a grass fire that eventually led to a shed being destroyed along with its contents.
- An operator was driving a piece of machinery across a steep pond embankment. The ground was wet and the machine slid down the embankment, hit a large rock and overturned into the pond. The operator was trapped under the water and did not survive.

DON'T LEARN SAFETY BY ACCIDENT

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