

Safety Alert

Winch Cable Damage

Incident #1

On 7/24/18 at 3:15 PM the Rock Ditch crew experienced a winch cable failure while conducting grading activities with a CAT 336 excavator on Hill 4.

Factors

- The slope has a rock ledge that was hammered out the day prior to the incident. The ledge was then covered by dirt to give equipment better traction.
- Approx. 1 hour prior to the incident the slope received a heavy down pour of rain causing muddy conditions.
- D8 #3 was only 20 ft. away from the 336 when the equipment began traversing over the previously covered rock ledge possibly causing both pieces of equipment to lose traction at the same time and shifting all the weight to D8# 2 winch line.

Incident #2

On 7/19/18 at 4:30 PM a Rock Ditch crew was conducting winching operations on Hill #4. The operation included a CAT 336 excavator being supported by 2 CAT D8 dozers while grading the ROW on a 40-degree slope. When the 2 D8s began winching the 336 back to the top the winch cable on one of the support D8s began to fray.

Factors

- The uneven terrain made it difficult for the equipment to stay in timing.
- Operators and spotters did not communicate with each other when slack began to develop in the line.
- When slack develops in winch lines the operation should be stopped to correct the issue and avoid shock load to the line.

Incident #3

On 7/10/18 at approx. 1:30 PM a hill crew was conducting cleanup operations on hill 7 using 2 CAT D8 dozers connected together by the 1 ¼" winch lines. Sometime during the operation one of the winch lines became damaged by a rock causing one of the strands to be broken and the thimble to be damaged.

Factors

- During the process of lowering the bottom D8 the line can develop slack as the blade pushes more dirt causing the D8 to move slower than the top D8 is lowering down.
- When the line develops slack and sags down where it can be dragged across rocks.

Incident #4

On 7/8/18 at 3:30 PM a hill crew was conducting winch operations on hill 7 and encountered a winch line failure where the line began to fray and then break completely apart at the ferrule.

Factors

- Damage to the ferrule led to weakening of winch line integrity.
- Failure to identify damage to ferrule.
- Shock loading of winch line due to D8 #3 jumping.

Actions Required Immediately

1. Frequent discussion on shockloading and its effect on winch lines.
2. Equipment placement and slope conditions to be reviewed prior to winching operations.
3. Stop the operation if anyone sees slack in the winch lines so winch lines can be slowly tightened to avoid shock load.
4. When additional D8 winch tractors are added in a side by side configuration use additional spotters when views of the winch lines may be obstructed.
5. Communication between operators and the rest of the ground crew to ensure operators can adjust when slack develops.
6. Lines painted on winch line to show stopping point of reel-in function in order to prevent ferrule/ socket damage from reeling them up into the winch.
7. Complete required equipment inspection. Focus on inspection winch line integrity, especially on ferrule/weak points of winch lines.
8. Spotters utilized, when practical, to assist in reel-in process to ensure that reel-in is stopped at appropriate position.
9. Crews to use spotters on the hill to communicate to operators if the winch line drags across the ground or is struck by any falling rocks.
10. Remind crews to never work downslope of any winching operations.

