



FIRE PROTECTION TRAINING

Procedures Handbook 4300

FIREFIGHTER SAFETY

TOPIC: Bulldozer (Dozer) Safety

TIME FRAME: :30

LEVEL OF INSTRUCTION: Level I

BEHAVIORAL OBJECTIVE:

Condition: A written quiz

Behavior: The student will describe the safety precautions to follow when working around bulldozers.

Standard: With a minimum of 80% accuracy

MATERIALS NEEDED:

- Appropriate visual aids
- Audio visual equipment
- Bulldozer if available
- Writing board and pens
- Video: CDF Bulldozer Safety – Susanville Training Center

REFERENCES:

- Teie, Firefighter's Handbook on Wildland Firefighting, 3rd Edition, Chapter 7, pages 278-286
- NWCG, Fireline Handbook (ICS 410-1), 2004
- Video: CDF Bulldozer Safety – Susanville Training Center

PREPARATION:

The bulldozer's ability to rapidly construct fire control lines makes it a widely used fire suppression tool. Because of the bulldozers size, power and limited operator visibility, there are definite safety rules to follow when working near one.



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BULLDOZER SAFETY

PRESENTATION	APPLICATION
<p>I. TERMINOLOGY</p> <ul style="list-style-type: none">A. Canopy<ul style="list-style-type: none">1. Roll Over Protection System (ROPS)B. WinchC. Tracks<ul style="list-style-type: none">1. Idler2. Drive sprocket3. Rollers4. Grouser padsD. Bulldozer blade<ul style="list-style-type: none">1. Types<ul style="list-style-type: none">a. Angle<ul style="list-style-type: none">(1) Manual(2) Six (6) way hydraulicb. Straight2. Ram3. Adjusting arm4. Push arm5. End bits6. Optional brush guards	<p>Video: CDF Bulldozer Safety</p> <p>Information Sheets 1-3</p>

4306.21

Page 2



FIRE PROTECTION TRAINING

Procedures Handbook 4300

BULLDOZER SAFETY

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<ul style="list-style-type: none">7. Optional rippersE. ICS dozer typing<ul style="list-style-type: none">1. Type I<ul style="list-style-type: none">a. Equivalent of caterpillar D-7 or larger2. Type II<ul style="list-style-type: none">a. Equivalent of caterpillar D-5 or D-6b. Most of the CAL FIRE dozer fleet3. Type III<ul style="list-style-type: none">Equivalent of caterpillar D-44. Horsepower rating and make and model will change the typing (check owners manual)F. Bulldozer operator<ul style="list-style-type: none">1. Heavy Fire Equipment Operator (HFEO)G. Bulldozer swamper <p>II. BULLDOZER USES</p> <ul style="list-style-type: none">A. Construct fire control linesB. Construct escape routes and safety zonesC. Scatter or reposition heavy fuels near the fire perimeterD. Separate burning from unburned fuels<ul style="list-style-type: none">1. Cotton bales2. Hay bales3. Log decks4. Sawdust	



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BULLDOZER SAFETY

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<ul style="list-style-type: none">5. Debris pilesE. Construct or Improve fireline access roadsF. Construct water barsG. Staging Areas, helispotsH. Post fire suppression repairI. Other incidents:<ul style="list-style-type: none">1. Flood Control2. Earthquakes3. Structure fire demolition <p>III. SAFETY</p> <ul style="list-style-type: none">A. Make the dozer operator and swamper aware of your location<ul style="list-style-type: none">1. Especially in dusty, smoky, low light conditions or night operationsB. Be alert for rocks and other rolling materials when working below bulldozers on steep slopes<ul style="list-style-type: none">1. Move to safe location if a bulldozer is working directly above you2. Post a lookout to warn others<ul style="list-style-type: none">a. Yell warnings e.g. “Rock Down”C. Do not walk directly in front of or in back of a bulldozer<ul style="list-style-type: none">1. Limited operator visibility<ul style="list-style-type: none">a. Enclosed cabs greatly reduce visibly	



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BULLDOZER SAFETY

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<ul style="list-style-type: none">2. Trees being pushed over by the bulldozer sometimes fall far in front of the bulldozer's position.D. Stay at least 50 feet behind and 100 feet in front away while bulldozer is operating<ul style="list-style-type: none">1. Dozer can quickly change directionsE. Keep hose lays to one side of the constructed bulldozer line<ul style="list-style-type: none">1. Bulldozer tracks will damage hose if driven overF. Do not approach the dozer until It has stopped and the operator has signaled you<ul style="list-style-type: none">1. Remain in full view of operator at all timesG. Never get on a moving bulldozer to communicate with the Operator<ul style="list-style-type: none">1. Pads snap shut at the top of the track and may trap a foot2. Moving tracks can throw and seriously injure personnelH. Do not permit anyone but the dozer operator to ride on the bulldozerI. Watch material being moved by a dozer<ul style="list-style-type: none">1. Long logs2. Boulders3. Rocks4. Stumps5. Snags	



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<p>J. When entering an area where dozers have completed work, watch for:</p> <ol style="list-style-type: none">1. Loosened rocks and wood debris2. Deep dust3. Weakened trees and snags4. Rattlesnakes5. Irritated bees <p>K. Do not sleep on a dozer line</p> <ol style="list-style-type: none">1. Dozers will often run back over lines to improve them <p>L. Stay clear of bulldozer loading and unloading operations</p> <p>M. Advise operator of hazards</p> <ol style="list-style-type: none">1. Overhead utility lines2. Fence lines3. Mine shafts, pits, or quarries4. Falling snags5. Cliffs and rocky areas6. Creek and river drainages or wet areas7. Underground utilities and pipelines <p>N. Support bulldozer fire control operations with hoselays where possible</p>	

4306.21

Page 6



FIRE PROTECTION TRAINING

Procedures Handbook 4300

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SUMMARY:

Visibility of the dozer operator is limited. Therefore, crews working near and around dozers need to pay attention to what they are doing and where they are working in relation to the dozer.

EVALUATION:

A written quiz.

ASSIGNMENT:

To be determined by instructor(s).