

<b>Title of Training</b>	<b>Bulldozer Safety Training</b>	
<b>Equipment Info.</b>	<b>Make/Type/Size/Model</b>	
<b>Material Needed</b>	Operators Manual Pylons/Orange Cones/Used Tires to Outline Hands On Obstacle Course	See Hands On Requirements On Page's 4 & 5 in this safety training.



## Bulldozer Safety Training

### GENERAL OPERATING GUIDELINES

Only qualified personnel designated by the Brieser Construction Company shall operate Bulldozer Equipment. Local #150 having previous experience operating the Bulldozers need only demonstrates the hands on competency skills listed at the end of this training in order to be certified on any Brieser and/or rental equipment used on our job-sites. I

- Safety must always be the operator's most important concern. The operator must refuse to operate when he knows it's unsafe and consult the supervisor when safety is in doubt.
- Bulldozer Equipment shall be inspected using the Manufacturer's Operating Checklist" at the beginning of each shift prior to its use. Brieser Constructions supervisor must act on the deficiencies noted to ensure repairs are made.
- Seat belts shall be worn and properly adjusted at all times while operating Bulldozer Equipment.
- Only the operator shall be permitted to ride equipment with the exception for training or maintenance purposes only, provided the trainer or observer is secured with a seat belt or safety harness and lanyard of appropriate length.
- The operator shall completely walk around the equipment and clear the area of personnel and obstructions before operating Bulldozers Equipment.
- Engines shall not be started unless gears are in neutral or park and the master clutch Disengaged if so equipped.
- Mount and dismount equipment correctly. Do not jump off Bulldozer Equipment. Face equipment when mounting or dismounting. Maintain three points of contact at all times. Hands shall be free of materials.
- Before an operator dismounts from Heavy Mobile Equipment, the brakes must be set, gears placed in position to prevent equipment movement, all attachments lowered to the ground and shut the engine off.
- The special instructions available in the operator's manual on shutdown and safety consideration shall be followed on diesel equipment.
- All equipment left unattended at night, adjacent to public roadways in normal use, or adjacent to construction areas where work is in progress, shall have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors to identify the location of the equipment.
- When parked on a grade, the wheels or tracks of Bulldozer Equipment shall be either chocked or turned into a bank.
- Bulldozer Equipment, traveling on bi-directional roads, carrying loads that project beyond its sides or 4 feet beyond the rear shall have warning flags at the ends of projection. Under conditions of limited visibility these loads shall have a warning light at the end of the projection. Flags or lights shall be attached to the end of the projection or be carried by persons walking beside or behind the projection.
- The maximum speed of travel shall depend upon the load being carried, current road, weather, and traffic conditions.
  - ✓ Limit speed to maintain complete control over the machine.
  - ✓ Equipment operators shall not exceed the posted speed limit.

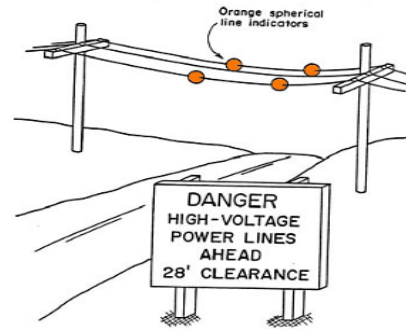
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- Headlights shall be turned on at all times when operated at night, inclement weather, or inside any of the storage buildings .Operators should keep eyes forward and the load should not block view of path. If load is blocking view the operator should back up with load.
- No person shall work or pass under elevated loads, blades or buckets unless properly blocked.
- Buckets, forks, or attachments shall be kept as low as possible when traveling.
- No modifications shall be made to equipment that affects the safe operations of the piece of equipment without the manufacturer's or distributors written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly. In no case shall the original safety factor be reduced.
- Equipment and attachments shall be operated according to the manufacturer's operating manual.
- Operators cab shall be clean and free of loose items such as tools, spare parts or personal items that may damage or jam control levers. Cab floor, all windows, controls, steps & handrails should be maintained free of dirt, grease or oils.
- Insure all safety guards are in their proper position and all safety warning graphics and decals are in place and readable.
- The engine shall be shut off and parking brake set during refueling. Smoking is not allowed in the refueling area. This does not apply to diesel powered equipment.

### HEAVY EQUIPMENT OPERATION NEAR POWER SOURCES

- Operators shall be alert for buried electrical lines and electrical line indicators in the form of flags or red concrete when performing any type of excavation.
- When high-voltage power cables for draglines, shall be handled Brieser SH&E Manual refer to the Electrical Procedure.
- When Heavy Mobile Equipment are operated under, over, by or near power lines, they shall maintain a minimum clearance of ten (10) feet from any part of the machine except where the power lines have been de-energized and visibly grounded at the point of work.
- Heavy Mobile Equipment should come in contact with the energized wires, the following shall be done:
  - A. The operator shall stay on the machine until contact is cleared or the current is shut off.
  - B. Keep everyone on the ground away from the machine and keep any personnel from coming in contact with load.
- If it is absolutely necessary to leave the machine, the operator shall leap away from, not step off the machine.



### SAFE OPERATING PRACTICES

#### 1. Personal protective equipment

- Hardhat and high-visibility clothing to be worn when not inside the cab.
- Safety boots in good condition, properly laced, must be worn at all times. Worn-out soles and heels could lead to slips and falls.

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- Eye protection will be worn where there is danger of falling or flying debris from equipment or loads, especially in windy conditions.
- Hand protection will be worn when handling cable or any other material where there is danger of cuts or puncture injury.
- Hearing protection will be worn when exposed to noise levels exceeding 85dBA.

**Mounting and dismounting** – three-point contact will be used to mount and dismount equipment.

**Inspection and repairs** – bulldozers will be inspected prior to use to ensure good mechanical condition.

When working under or around bulldozers, for inspections or repairs, the bulldozer must be locked and tagged out, and immobilized and secured against inadvertent movement.

**Housekeeping** – cabs, steps and mirrors must be kept clean at all times. All debris should be removed.

**Parking** – the bulldozer must be parked on level ground, clear of hazards, to allow ease of access.

**Travelling** – proper gear selection must be used to maintain control. Drive according to terrain conditions.

**Danger zone** – danger zone is defined as the area around operating machines or working personnel, in which there is potential for being struck by moving equipment or objects. The danger zone may vary according to the machine or work being performed. Operators must make sure that all persons, vehicles and equipment are clear of the danger zone before the vehicle or its components are moved.

**Fuelling** – shut off the engine while fuelling. No smoking. Be aware of slip and trip hazards.

Beware of spills and splash-back. Return hose to its proper storage position when fuelling is completed.

### Starting and Testing:

**EXHAUST FUMES ARE DANGEROUS - ALWAYS HAVE A RUNNING MACHINE IN A WELL VENTILATED AREA.**

- Fasten your seat belt and adjust the seat prior to starting controls should be in neutral and the parking brake set before starting engine.
- Start the engine only from the operator's seat.
- Warn personnel in the area that you are starting the engine.
  - Check all gauges, light, instruments and warning devices to assure that they are functioning properly and the readings are within normal range.
  - Test steering right and left.

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- Test brakes against ground speed to be certain there is no malfunction.
- Ensure all implement controls are operating properly.

### **DOZERS**

- Operate the controls only with the engine running.
- Do not allow riders on the machine unless additional seat, seat belt, and rollover protection are provided.
- The operator must satisfy himself that no one will be endangered before moving the machine.
- Report any needed repairs noted during operation.
- Carry implements close to the ground, approximately 40cm (15 in) above ground level.
- Stay a safe distance from the edge of cliffs, overhangs, and slide areas.
- If the machine begins to sideslip on a grade, immediately dispose of the load and turn the machine downhill.
- Be careful to avoid the condition which could lead to tipping when working on hills, banks, or slopes, and when crossing ditches, ridges, or other obstructions.
- Work up and down slopes, rather than sideways, whenever possible.
- Keep the machine under control and do not work it over its capacity.
- Be sure hitch points and the towing devices are adequate.
- Connect trailing equipment to a drawbar or hitch only.
- Never straddle a cable, wire rope, or similar device nor allow others to do so.
- Personnel are prohibited to be between the machine and trailing equipment when maneuvering to connect them. Block the tongue or hitch of trailing equipment to align it with the drawbar or hitch.

## **Operate Dozer Hands On Evaluation**

### **Perform basic operator functions**

#### **Learning Objectives:**

1 The employee will perform basic operator functions in accordance to the Heavy Equipment Operator Practical Assessment.

#### **LEARNING TASKS CONTENT**

1 Perform basic moves

- ✚ raise & lower, tilt blade (&angle for 6 way blade)
- ✚ move forward, stop, back up, stop
- ✚ lower blade, apply park brake, lockout transmission

2 Drive dozer through simple obstacle course

- ✚ pylons or used tires outlining an obstacle Course
- ✚ hills and slopes
- ✚ forwards and backwards

3 Push a large tire over uneven ground  drive dozer over uneven, hard packed ground, raise and lower blade to keep moving tire without making contact with ground

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**General:**

- ✚ Visual checks, constant awareness of space, position, clearance, safe movement
- ✚ Operates with smooth and precise control of hydraulics, appropriate position of blade, minimal impact
- ✚ Operates with smooth and precise control of drive train, appropriate gear and engine speed, avoids rocks/obstacles, shifts directions at idle
- ✚ Enters and exits machine safely (3 point contact, parking position, brake)

**Specific to this task:**

To complete the evaluation requirement for the dozer the employee (Operator) must be able to demonstrate the following practical skills:

- ✚ Demonstrate the safe operation of equipment including observation of surroundings.
- ✚ Perform pre-start checks, start-up/shutdown procedures and monitor performance of the equipment.
- ✚ Perform daily maintenance tasks.

**Perform basic moves with equipment including:**

- ✚ Move forward, stop, back up, stop, turn left and right stop (flat elevation).
  - ✚ Apply park brake, lock out transmission.
  - ✚ Shift transmission.
  - ✚ Demonstrate control of blade by raising, lowering and changing the angle of the blade.
  - ✚ Maintain blade angle in flat position (flat smooth to the surface).
  - ✚ Move dozer into a simulated and marked parking area without hitting pylons.
- A. Operator must move dozer within 1 foot of the back pylon without driving over the pylon or hitting the side pylons. (Pylons must be set to have a tolerance of 4 ft. on each side of the dozer. One 90 degree right hand turn and one 90degree left hand turn must be made on route to parking area. (Pylons must be placed so they are visible to the driver).
- B. Push tire 100 ft. without losing the tire either under the blade or off the side of the blade.

**Important Notice**

*This Safety Training Topic (STT) does not necessarily cover all possible hazards associated with this equipment and should be used in conjunction with equipment manual. It is designed as a guide to be used to compliment training in the field at Brieser Construction and as a reminder to users prior to equipment use.*

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<b>EMPLOYEE NAME (Print or Type)</b>	<b>EMPLOYEE SIGNATURE</b>	<b>TRADE</b>	<b>JOB TITLE</b>
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