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## Operating Procedures

### Familiarize Yourself

1. During the familiarization period, we suggest your passes be made on relatively level terrain. This will acquaint you with the true feel of the controls and machine handling while loading.
2. Start your pass with the bucket rolled back against the stops. The angle of the cutting blade has been set at the factory for the correct loading angle, or rake.
3. Position the machine as far back as possible, and headed toward the dump area. This will give you time to fill the bucket and feel the control action without being in a hurry.
4. As you become familiar with the feel of the controls, and the action of the bucket during different loading actions, you will recognize the advantages and where to use the procedure of tilting the bucket forward to gain additional cutting pressure.

### Getting the Job Done

1. Lower the bucket until it is resting flat on the ground. Selecting first gear and forward direction, proceed at about one half (1/2) the throttle and observe the material flow into the bucket. At this point if the material appears not to be flowing fast enough, apply slight down pressure. This will immediately increase the flow, and the material will appear to "boil." As this occurs, release the down pressure and maintain the boil until the bucket becomes full and the engine begins to lose RPM's. Slowly apply throttle to maintain boil, being careful not to spin the wheels. With a little practice, you will be able to perceive this before it occurs. Now you are ready for the feel of weight transfer.
2. Hoist the bucket slightly, returning the joystick to the neutral position as soon as engine RPM's pick up or spinout is avoided. You will immediately notice an increase of material boiling into the bucket. Maintain this until the bucket is full. At this time you can raise the bucket to the planing position, advancing up and down as necessary to maintain load without losing or boiling material. With a little practice, you will discover how easy it is to maintain a smooth work area. This is very important to achieve fast cycle times, particularly on return runs. Learning to spread to an even, smooth depth is perhaps the most difficult phase of operating. As with any machine you have operated, with familiarity and understanding, you will find yourself making all the correct moves automatically.
3. Take a good look at the bucket cutting edge. Notice how it projects below the bucket hinge pin as it tilts forward during the dump cycle. First, it is slight, and increases as the bucket rolls out, until the total projection is about 12" to 18", depending on the model.
4. With the projection below the grade, if the bucket is not raised this amount during dump or roll out, you would actually start to dig at a time when you were ready to dump. This, of course, would not only cause you to stall or spinout, but would leave a very rough or washboard dump area, as you attempt to raise the bucket after the digging started.
5. With this in mind, you know as you start to roll the bucket out to dump you must hoist, or raise the bucket the amount of the projection below grade. Because the hoist control and the rollout control lever are on the same lever, the dump and hoist function is relatively easy to coordinate at this critical moment. Understanding this requirement, it soon becomes automatic for perfect grade and dump control. Remember you only have to hoist 12" to 18" for clearance when dumping and maintaining grade. However, the thinner you spread, the slower you roll out the bucket. This is because dumping the material too fast reduces the traction weight and more material is dumped in front of the bucket than can be pushed with an empty machine. Thin spread requires constant practice, and precise control. Once achieved, this skill is very useful for stocking out where compaction is so important.

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## Conveyor Chute Operation

1. Side casting, or dozing out from discharge pile, usually is a matter of moving high volumes of material in a relative short period of time. This requires picking up a full load in a short space, and dozing it out 300 to 800 feet.
2. Because traction is so important, try to keep loose material from building up in the area where you are dozing and filling the bucket. You can do this by starting back from the base of the pile, lowering the bucket to ground level without digging or picking up material. Approach the pile at an angle to penetrate it with approximate one third to one half the width of the bucket. As the bucket fills and spin out appears imminent, apply lift or hoist pressure only as needed to prevent tire slippage, and steer slightly away from the pile. This will also give additional relief to the engine RPM's and tire slippage.
3. While this type operation makes it difficult to completely fill the off corner, the excess amount in the full corner usually will offset the low corner. The average volume moved each pass far exceeds the straight or "U" blade type machine. In addition, you must remember the material picked up in the bucket each pass remains there until you selectively dump it. Several passes from each side will aid in obtaining maximum loads, and keeping a smooth level grade.
4. Continued dozing from one side and the occasional sloughing of the pile will sometimes cause an undesirable slope to the grade. This can easily be straightened out by moving away from the pile approximately one half the machine width for one pass. This allows one half the bucket on the high side to cut out to the lowest level, thus leveling to the original grade.

## Dozing on the Level

1. To obtain maximum load retrieval, start doze on as level a grade as possible. Lower the bucket and move into the pile (See Figure 4-5-1).
2. Fill the bucket gradually.
3. Do not cut in one slot only; keep the pile as level as possible (See Figure 4-5-2).
4. Tilt the bucket slightly forward to increase the cut when working in compacted material. This will reduce the drag on the bottom of the bucket (See Figure 4-5-3).



Figure 4-5-1



Figure 4-5-2

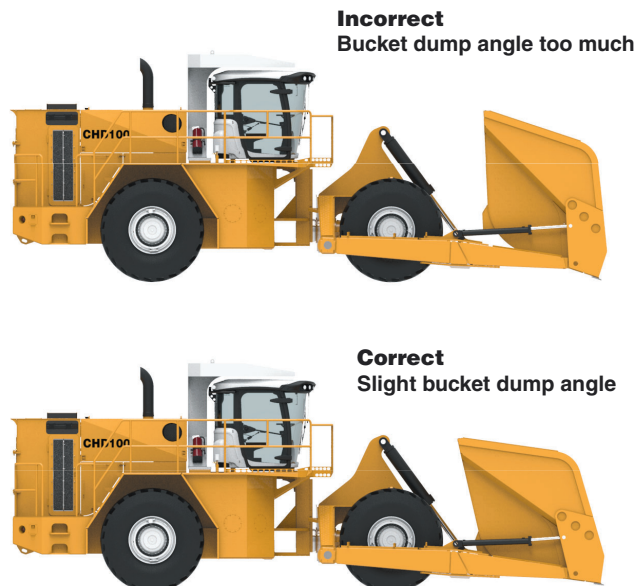


Figure 4-5-3



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### Cutting on a Knoll

When cutting on a knoll or a steep grade, tilt the bucket slightly. This allows the bucket to load more freely (See Figure 4-5-4).



*Figure 4-5-4*

### Reclaiming

Start to hoist and dump a load approximately 20 feet from the reclaim in-feed or the edge of the pile. Spending less time at the reclaim will increase the cycle time. This will also reduce the chance of slipping into the reclaim (See Figure 4-5-5).



*Figure 4-5-5*



## Knocking Down a Cone



### WARNING

Never place yourself or the Carrydozer under the overhang (See Figure 4-5-6). Approach from the outside of the overhang with the bucket.

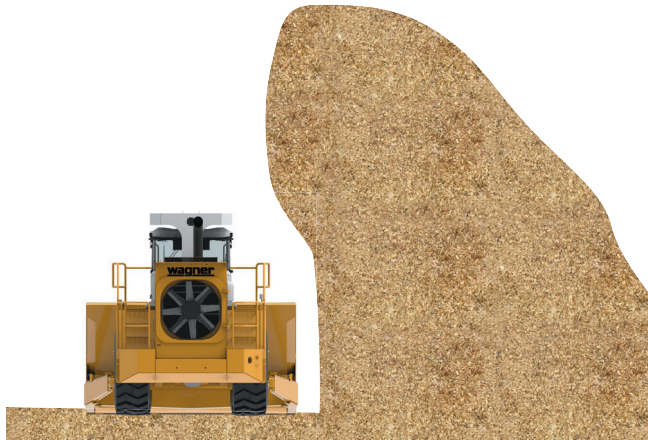


Figure 4-5-6

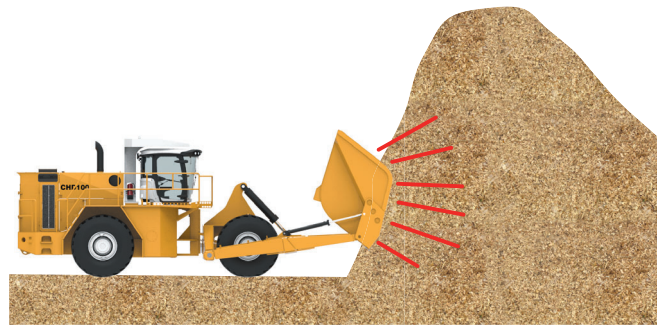


Figure 4-5-7

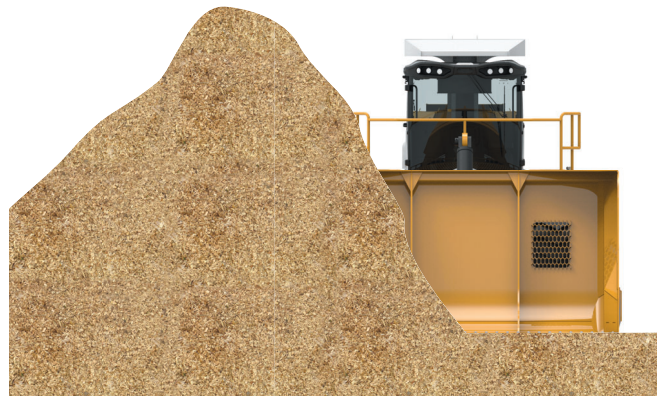


Figure 4-5-8

1. If it becomes necessary to knock down an overhang, use the following procedure as shown in Figure 4-5-7.
2. Do not cut into a cone with the bucket too high. If you enter the pile with the bucket too high, the wheel opposite the pile will be much lower making an uneven cut. Only cut into the cone with the bucket down and level (See Figure 4-5-8).
3. Cut down the hump in dozing path. If you have a build up or mound of material in the path in which you are dozing, you will need to cut the mound out or you will continue to loose material when dozing over it. Thus increasing the size of the mound with each pass (See Figure 4-5-9).
4. Cut at different angles. This will make the job of knocking down a discharge pile much easier (See Figure 4-5-10).



Figure 4-5-9

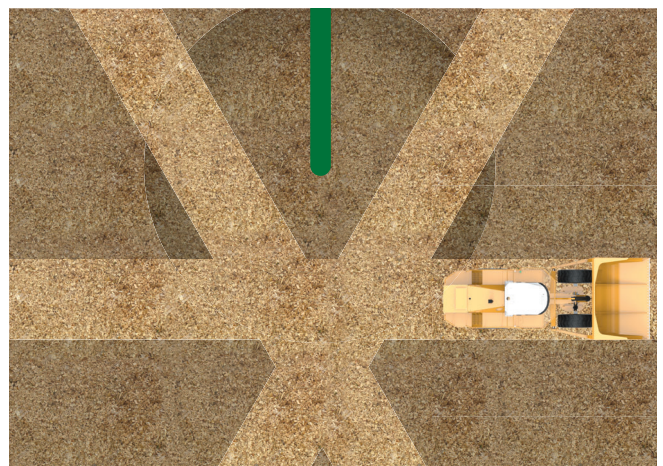


Figure 4-5-10

## Cutting on the Edge of a Pile

1. When cutting on the edge of a pile, be certain to leave a sufficient berm. There are safety and practical reasons for this procedure (See Figure 4-5-11).



## WARNING

The width of berm required for safety purposes is dependent on the slope of the pile and the nature and condition of the material. The berm should never be less than 2 ft wide, and in many cases, should exceed 2 ft.

2. You can back blade with the bucket tilted forward, with no damage to the machine (See Figure 4-5-12).
3. Building a road off a pile (See Figure 4-5-13).



Figure 4-5-11



Figure 4-5-12



Figure 4-5-13