
CHIP AND COAL DOZER OPERATION



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On occasion and in reference to dozer operating procedures, a new man may ask - "How do I start"? The following information has been gleaned from experience and we trust that it will be helpful. Basically, the procedures herein do apply to transporting coal or chips, but, in the following text we will use the term "chips" only.

If possible, start your first pass back away from the pile so that you are able to get a level start. Tilt the bucket all the way back until it comes up against the stops. Let the bucket down until it touches the chips and then stop. If you let the bucket rest too heavily on the chips, it will cause the bucket to start digging too rapidly.

While you are learning dozer operation we suggest that you stay in first gear until you feel familiar with the operation of the machine, and how well you are able to keep a level grade. With familiarity you can push into higher gears. If you are starting your push on the crown of a pile (hill), or starting up a pile and your cutting edge is not digging in (or perhaps you want to dig faster), tilt the bucket forward slightly (dump position) to start the cut faster. After the cut has started, roll the bucket back to the stops to slow the cut down and give you more of a planing action, or, you may find that you are digging a deep hole to start off with.

The proper way of filling the bucket is to gradually pick up your load as you move along. Do not try to fill the bucket in one spot, unless you are specifically cutting down one area, or you're cutting out of a pile. If you pick up your load gradually you will keep a more level floor and avoid the washboard effect. Once you have started your cut the bucket edge disappears from view, so you will have to go mainly by the feel of the machine and by watching the chips as they fill the bucket. If you see the chips going up rapidly in the bucket and you feel the machine starting to pull down; then you will know that you are picking up chips too fast, and that you must bring the hoist up slightly. If you bring the hoist up too high you will have a tendency to start losing your load, thus leaving a hump or pile of chips in front of you. Also, if you notice that your load is beginning to fall you are probably too high, and you are losing your load by going over the top of the chips - hoist down slightly with the lift arms. Once you have your load, it is not necessary to keep digging, as the chips will boil over the back of the

bucket resulting in lost motion and horse power. There is a happy point of balance, wherein the bucket does not gain or lose its load as you transport.

When working on an upgrade or pushing a large load you will experience the feel of the tires as they start to break or slip. At this time let up slightly on the throttle and hoist up slightly to put more weight on the bogie axle (bucket end) to stop the spin-out. Here again, after you regain your footing, hoist back down so as not to lose your load. Generally speaking, hoisting up approximately two inches will transfer enough weight to stop a spin-out.

When pushing out of a pile from a truck dump, blower pipe or conveyor, do not try to fill the bucket as you would with a front end loader. The procedure is to shave off the edge of the pile gradually. By the time you get to the end of the pile you will have a load and you can then use the planing action to transport. The size and hardness of the pile will determine the amount of cut to take out. When cutting out of a pile make cuts at different angles, as this action will help break down the pile and make pushing easier. When cutting out of a pile, the pile has a tendency to build up a high face which can be dangerous if it topples. Go in with the bucket high to knock down the face, or, if possible, go around to the opposite side and push the pile over. If this is not done, there is a chance of the pile caving in on top of you. With a roll-over cab you are relatively safe, but pressure could break glass and that can be dangerous.

When you reach your dumping area you should have approximately (30) to (35) feet to dump your bucket before you reach the edge of the pile or hopper. In traveling that distance, hoist up approximately (8) to (10) inches and start dumping. Therefore, when you get to the edge of the pile or hopper, your load is in the full dump position, and you are ready to back away. In addition, when in the full dump position you are quite safe, as the cutting edge of the bucket is no less than (11) feet from the tires, which is quite a safety factor on this operation.

One last message. If you are spreading chips on a pile, hoist up approximately (6) to (8) inches and start tilting the bucket forward, which will spread the chips. The depth of the spread is determined by the height of the hoist while dumping.