

## Grader Operation Tips

### Cutting:

- *The end result is more important than number of passes.*
- Determine desired result. Is the whole road being cut or only spots with potholes etc?
- Determine how many passes will be necessary to cut. This depends on moldboard length and width of road.
- Try to visualize where each windrow is going to end up, so that material will not end up too far from centerline. If too far from centerline material is difficult to get back without losing off toe or leaving too much in middle, for the next pass.
- Keep blade angle sharp enough (especially 3<sup>rd</sup> or middle) pass to keep windrow closer to the middle.
- Set blade to desired crown, and desired angle then use blade pitch (roll) to control depth. If machine is spinning or taking too much material, roll back. If going too easy or not cutting enough material, roll forward. (*Scarifier blades require specific angle to keep teeth revolving*).
- Try to cut berms, and blend (mix in) if sod and grass aren't too bad. Don't leave a (double ditch) berm. In the fall leaves and pine needles etc. can cause problems by balling up.
- If too high on either side or unable to cut berm (too much undesirable material) shift blade to side for a few feet, then back, to cut through the berm, giving water an escape route.

### Laying Out:

- *Simplest method for beginner is to finish cutting passes with windrow as close as possible to center line, then;*
- Make a pass down the middle, distributing material as close as possible to equal on both sides of centerline, then one pass each way should distribute, feather edge and leave (crown) cross section. *Crown should be minimum of ½" to ¾" per foot, from centerline to edge.*
- Keep 4" of daylight visible on outside edge of moldboard. *Maintaining this daylight will prevent a (double ditch) berm.*

- If material isn't spreading wide enough (near desired edge) revolve moldboard slightly (while moving) to the outside. If spreading too wide (leaving berm) revolve to the inside or roll moldboard back.
- If leaving too much material inside (too thick) roll moldboard back. *This may make it necessary turn blade to outside to achieve desired width.*

*Tips:*

- Visualize what you want to achieve.
- If blade (moldboard) is set up properly, only minor adjustments will be necessary.
- The grader is designed to do this work. Know the controls so you can take advantage of its capabilities. Experiment with controls in areas where possible to do so.
- Control speed, as going too fast will cause chattering, (hopping) which leaves (corrugations) washboards.
- If you feel chattering, immediately change angle for a few feet so blade can correct.
- Try to minimize hollowed out blade. Hollowed out blade makes cutting *but especially* laying out, difficult.
- Try to keep equal lengths of blade regardless of length, outside the tires. This allows more equal distribution and prevents obstacle for passing motorists.
- Using blade pitch (roll) makes feathering up to a bridge, pavement or ending a spreading pass much easier than trying to lift both ends of the blade and steer at the same time.
- Raising or lowering one end of the blade has a slight opposite effect on the other end.
- Shifting table to the outside will lower outside edge and raise inside edge. Sometimes this can be useful and only requires moving one lever.
- Always keep in mind that one of the reasons you're working on the road is for the benefit of the (motorists) people using it. Be courteous and a good will ambassador for the municipality, appreciative of the fact that most drivers have no clue about how difficult it is to do what you're doing, and they don't have to. It's your job, and *they don't require you to understand theirs.*