The unique feature of the renovation seeder is its power-driven tillage blades. The blades have been designed to perform a specific function: prepare a mini-seedbed in grass sods. Performing such a function in various types of soil conditions causes considerable stress and wear to each blade. Replacement blades are available, but expensive. Although new blades will be necessary at some time in the life of the machine, the life of the original blades can be greatly extended through proper care and maintenance.

TILLAGE BLADES

Power-driven tillage blades are constructed very much like the circular saw blades which are used to cut wood. The teeth on these blades do the tillage while the renovation seeder is operated over a grass field. The teeth are subjected to constant wear from the soil, rocks and other materials in the grass field.

Blades should be checked often for overheating. Blades will overheat when string or other objects become wrapped around axles. As blades overheat they are more susceptible to wear and bending.

The important characteristics of power-driven tillage blades are shown in Figure 3. The side view shows the tooth profile and the radial clearance angle. The edge view shows the set angle, which provides side clearance as the tooth cuts through the soil. The set angle also determines the width of the furrow that is tilled with the blade. Both views show the layer of hard surface material that is applied on...
each tooth to absorb wear. The hard surface material is tungsten carbide and is applied with an oxy-acetylene welding torch and Haystellite 60 welding rod.

WHEN TO RESURFACE TILLAGE BLADES

Power-driven tillage blades will function properly as long as the tooth shape shown in Figure 3 is maintained. The tooth shape will deteriorate rapidly after the hard surface material is worn away.

Power-driven tillage blades should be checked each day for broken teeth or any unusual wear and should be examined closely for wear after the machine has been operated for 20 to 30 hours. If the hard surface material is beginning to wear away, shiny spots will appear along the tops of the teeth. When these shiny spots appear it is time to put a new layer of hard surface material on each tooth.

RESURFACING POWER-DRIVEN TILLAGE BLADES

When shiny spots appear along the tops of the teeth, remove the tillage blades and clean them with water in preparation for resurfacing. The supplies and equipment that are needed to resurface power-driven tillage blades are as follows:

1. Haystellite 60 welding rod - 3/16" in diameter.
2. Oxy-acetylene welder with a #6 tip.
3. A simple jig to hold the tillage blade in a convenient position for the person who is applying the hard surface material.

Apply the hard surface material in thin layers until it is approximately 1/8 to 3/16 of an inch thick along the top and side of each tooth. Follow these steps in applying the hard surface material:

1. Before resurfacing, check the blade for bent teeth and straighten as needed.
2. Adjust the #6 welder tip to obtain a neutral flame.
3. Pre-heat the surface until it appears bright red (do not melt the surface).
4. Melt the Haystellite 60 rod onto the surface and it will flow along the surface.
5. After a blade has been resurfaced, allow it to cool in ambient air - do not quench the blade to cool it.

Mention of a trademark or brand name is not meant to imply approval to the exclusion of other similar products that may also be suitable.

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