Tractor Spark Plugs Wear May Mean Poor Firing

supposed to change the spark this from happening. plugs in your tractor after every 250 hours of operation? Why not leave them in for 300-500-even 1,000 hours as long as they look okay when you take them out?

There's a good reason, acg neers there advise that the spring. I need some more beneath their feet ir 250 hour change recommendation is not actually based on the fact that spark plugs are "worn out" in the strictest sense after 250 hrs. of service. This figure, selected after extensive spark plug life tests-merely represents a safety factor beyond which plugs may misfire under an extremely heavy load It also represents the point at which gas economy and horse power begin to drop

The engineers consider a spark plugs worn out when it reaches the point where it is likely to misfire-regardless of its appearance. And, contrary to popular opinion, misfiring doesn't necessarily mean the plug didn't create a spark It means simply that the plug failed to ignite the gasoline properly — whether a spark was produced or not!

How can a spark be produced and the plug still mis-fire? Because "spark tracking" (or high-tension current leakage) through carbon deposits on the spark plug's firing end can result in a weak spark, which in turn causes incomplete burning of the fuel mixture, and results in a loss of both power and eco nomy.

High resistance which develops as the spark plug electrodes become rough and uneven and the gap between the electrodes increases, also can result in the spark being too weak Here too the gasoline isn't ignited properly and incomplete burning of the fuel charge can result.

A new spark plug with the correct gap setting needs about 5000 volts to fire However, as the plug remains in service, constant heat and chemical attack plus electrical erosion cause the gap to become w der, thus increasing the amount of voltage needed to fire the plug.

Most spark plug engineers agree that a safety factor is needed in the spark plug to ensure proper plug performance under every possible operating condition Consequently, they try to keep the amount of voltage necessary to spark the plugs well below the amount of voltage that the coil is capable of and keep in producing. . mind, this safety factor must take into consideration the fact that as the ignition system becomes older, it's potent al high voltage outputdrops off. A new ignition sys tem, for example, may be able to produce over 20,000 volts of electricity. The same system after 1100 or 1200 hours without replacing any of the parts may only be able to produce 14 to 15,000 volts

By extensive testing programs, Champion engineers have determined that the max mum useful life of a tractor spark plug is about 250 hours—if the safety factor is to be kept in mind. Plugs used beyond this limit generally will not be able to spark under all operating conditions.

Remember, as plugs reman in service, more voltage is neede to make them spark As the ignition system ages ,its ability to produce high voltage lessens. If the point is reached where the spark plugs require more voltage to spark than the system can produce, the spark plugs missire.

Changing spark plugs at

Ever wonder why you're 250-hour intervals prevents round their corn rows.

Corn Growing (From page 1)

cording to the technical ser- to try it (wheeltrack plant- farmers could walk through seed appears to germinate at to this meeting and Im vices department of a nation ing) on a piece of alfalfa the wheeltrack plots with a more uneven rate when the Mr. Hess is still young al spark plug company En- that didn't do too well this out feeling the slippery mud soil has not been worked ough to try some new in

The looseness of the soil came in for its fair share of the discussion In the adjoining field, worked in the showed considerable uneven- vi'le R2 summed up conventional manner, pud-ness in heights of the corn, feelings of many in attention loose soil might not cause a dles of water from the re-most growers felt the crop ance when he said, "We picking problem in a wet cent rain storms stood in would become more uniform resist change, but I app fall. He said, "I am tempted several places, while the later in the season. The corn ciate the opportunity to con

corn for refilling the silo; so Fredd pointed out the wa- same reason, weeds gern I might just try it." Kreider ter absorbing ability of the ate later and are shaded also said he didn't think the loose soil and explained that by the crop. rough ground would present the water would be retained any more problem at picking better as well. Since the soil time than the high ridges has not been compacted and "we didn't do as good a some farmers throw up a- will not be stirred, no crust of controlling grass as forms on the surface and wa- would like to see." ter does not rise to the surface to evaporate.

> While the wheeltrack plots Richard Maule of Quan fine and packed firm For this ods."

Hess says he is well ple ed with the trials but a

At the discussion after inspection of the field

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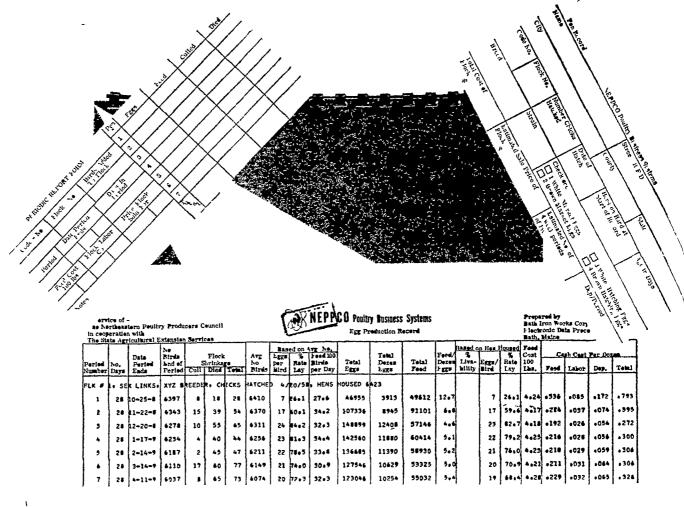
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