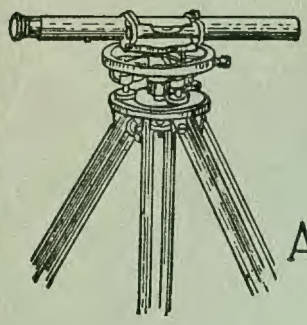

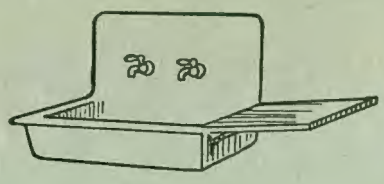

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Better Practices in Servicing Farm Tractors

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The modern farm tractor leaves the factory with a potential life of many useful work hours. This long life will be realized if reasonable care is given the tractor by the operator. Every mechanical device needs attention. This applies to the tractor in particular because of the adverse conditions under which it, of necessity, operates. The instruction books furnished by the manufacturer cover the items which should be carefully observed.

Lubrication

Perhaps the most important item in the regular care of the tractor is the lubrication. Specific instructions and recommendations covering the matter of lubrication are given in the tractor manual. The manufacturer makes certain recommendations as to the proper weight of crank case oil to be used and all too often a much heavier oil is used. The matter of changing the oil regularly is another item frequently neglected. An oil filter often is a part of the engine lubricating system. This filter cannot be expected to function if the filter element is not cleaned regularly. The men building the machines have definite reasons for making the recommendations which are found in the operator's manual. Those reasons are the results of long experience.

The ball and roller bearings, found in various parts of the tractor, cannot give good service if not regularly and properly lubricated. The oil which will properly lubricate the transmission bearings in warm weather is too heavy if the tractor is to be operated in cold weather. Because the transmission cases of many of our tractors require a considerable quantity of lubricant and because many tractors are used but little in cold weather, operators hesitate to change to lighter oil. The oil should be maintained at the proper level and it is suggested that the level be checked when the oil is cold rather than when it is churned up and warm as a result of operation.

Bearings

Engine bearings should be checked at least once each season. The warning is given not to have these bearings too tight. With too little clearance at the connecting rod bearings, it is quite possible that insufficient oil will be thrown out to properly lubricate the cylinders and pistons. Front wheel bearings should be cleaned out and repacked at least once a year. It is suggested that new felt washers be used when the wheel bearings are repacked. The front axle should occasionally be raised off the ground with a jack in order to check the wheel bearings for looseness. If the bearing becomes loose, the dust seal is apt to be damaged, allowing dirt to enter the bearing. When some special kind of lubricant is recommended for a particular bearing, as for example a pump or fan bearing, there is usually a very good reason for the recommendation. Care exercised in some of these matters will be amply repaid in prolonged life and improved operation.

Carburetion

We are all interested in keeping fuel consumption to the lowest point possible with ample power. Good carburetion, when heavy fuel is used, is only possible when proper attention is given to heat control. The engine must be kept hot. The manufacturer has supplied radiator curtains, thermostats, manifold controls, motor meters and other devices for insuring good carburetion. He cannot, however, always be present to see that they are properly used.

Air Cleaners

The later air cleaners used on tractors are designed to require a minimum of servicing. The servicing usually necessary is to remove the oil cup at the bottom, clean out the dirt and refill with new oil. The frequency with which this has to be done depends upon the conditions under which the tractor is operating. Under the heading of lubrication it was mentioned that many use too heavy oil in the engine. The same oil is usually used in the air cleaner and a heavy oil is not suitable to use in a cleaner especially in cool weather. It is sometimes necessary to remove the dirt from the wire wool or screen. If this is not done, there will be a restriction of the passage with a possibility of the oil going into the engine with the air. In the case of Diesel engines this will cause the engine to race due to the added oil going into the cylinders. All connections between the cleaner and the carburetor must be kept tight so no dirt can enter through possible openings.

Ignition

The ignition systems found on our modern tractors are a great improvement over those in use some years ago. The servicing required on a magneto has been reduced to a minimum. The distributor may require cleaning and the timer points may need to be cleaned and the gap adjusted. The bearings are practically self-lubricated and the magneto, as a whole, is sealed against the entrance of oil from the outside. The timing of the magneto on an engine is not difficult. However, some operators do not do a very good job of improving the ignition setting. It would seem that one of two things should be done if it is thought that the magneto requires resetting. Either get someone who really knows how to do it, or carefully follow the directions in the instruction book. Spark plugs should be kept clean and the points properly spaced.

Rather poor judgment is often used in the matter of tractor servicing. It is quite common to hear operators boast as to how long they have run their tractors without grinding the valves. No doubt the tappet adjustment has been neglected quite as much. Because of their importance it is suggested that the valves be ground each year at least and that the tappets be more frequently examined for the clearance.

Although engine bearings seldom do require servicing, they should be examined at regular intervals to see if they are in good operating condition.

A general cleaning of the crank case interior including the oil pan, the oil pump screen, and similar parts is a good procedure. All gaskets should be carefully examined and, if any breaks occur, new ones installed.

There are two common practices followed after an engine has been overhauled. One is to put the tractor immediately to work on a rather heavy job and the other is to idle the engine at an unduly low speed. Neither should be done. Most tractors have been put through a breaking-in period before being delivered and it is recommended not to force them for a few days. New parts should mean another breaking-in period. The slow idling speed is bad because in most engines some of the parts depend upon the splashing of the oil for lubrication. If the speed is too slow, the oil will not be thrown to these parts with a resulting lack of lubrication and probable failure of some of the parts. It is recommended to idle the engine at half speed.

The operator of a tractor or any other machine should become accustomed to its noise or tune, as one service man put it. If the noise changes, the operator should be alert to notice it and start to find out what is wrong. Don't wait until it becomes serious.

Manufacturers are interested in the operation of the machine throughout its life. In addition to the machine itself, they place in the operator's hand a manual of instructions which is the result of their own experiences and the experiences of those with whom they have contacted in the various services which they have rendered. Why not study that manual carefully? It may be very worth while.

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