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Cold Tractor Operations

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COLD TRACTOR OPERATION

Farm Machinery Fact Sheet FM-05

By *Dr. Von H. Jarrett*, Extension Agricultural Engineer

If your diesel tractors are going to be used during cold winter months, a few precautions should be observed.

1. Keep your tractor engine tuned up for a quick, easy start the first turn.
2. Start with a tractor being protected by a shed when not being used.
3. Invest in an electric plug-in block heater that screws into the side of the engine.
4. Keep it plugged in all night long or on a time device for several hours of use before starting the tractor.
5. Throw a canvas or other cover over the hood to retain more of the warmth provided by the block heater.
6. Diesel fuel will not fire until air in the combustion chamber hits about 800 degrees.
7. Oil that has been kept warm overnight is less sluggish in moving to the bearings, rings, rocker arm shaft and the vital parts of the engine.
8. Switch to a lighter weight or multiple viscosity engine oil for cold weather operation.
9. Keep a good battery fully charged.
10. A trickle charger will help keep a battery up if only used once a month.
11. A battery when cold, at 32 degrees, has only three quarters the starting power it has at 80 degrees.
12. When everything else fails use ether sparingly. Make sure the engine is turning over before you inject the fluid.
13. No matter how frustrated you get, never operate the starter more than 30 seconds at a time. Allow a 2 minute starter cool down between tries.
14. When the tractor starts make sure you idle the engine under 1000 RPM's for several minutes. If you open the throttle on a turbo-charged engine, the lack of lubrication could cause serious damage.
15. Engine temperature on a diesel engine is as important as oil pressure. Unburned diesel fuel will dilute oil causing failure of bearings, rings, sleeves and other components.
16. Proper operating temperature for most all tractors is about 180 degrees.
17. Check your thermostats in a pan of hot water with a good known temperature thermometer. A 180-degree thermostat should partially open at 180 degrees, not at 160 or 200 degrees.

No matter how cold it is, once you get a tractor started and warmed up, you're in business. Cold weather itself offers little challenge to a good basic preventive maintenance program the year around.

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