



## **COLD TRACTOR OPERATION**

Farm Machinery Fact Sheet FM-05

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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.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert L. Gilliland, Vice President and Director, Cooperative Extension Service, Utah State University, Logan, Utah. (EP/2-95/DF)