



ENGINE COOLING SYSTEM

Farm Machinery Fact Sheet FM-10

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The cooling system is a key to efficient engine operation. An internal combustion engine only uses one-third of the power produced. One-third heats oil or goes out the exhaust and one-third must be controlled by the water cooling system.

1. An engine wears out four times faster if it continually operates at a low temperature.
2. A tractor doing the same work will use 3.8 gallons of fuel per hour at 400 and only 2.8 gallons of fuel per hour at 1800. Warm up your engine before putting under load.
3. Too much heat can damage an engine, increase oxidation to the oil, and reduce the effectiveness of the additives in the oil.
4. Excessive heat may attack seals, liners, gaskets, and sealants.
5. A thin (1/16") layer of calcium carbonate build-up on an engine is equal to 4" of solid cast iron in heat transfer.

Antifreeze

1. Antifreeze should be changed every year unless you add chemical inhibitors to reinforce the rust inhibiting ability.
2. Diluting antifreeze one-third to one-half with water is usually recommended. More than two-thirds antifreeze is too much. It offers less freezing protection rather than more.
3. Distilled or rain water is better than plain water because of the corrosion deposits.
4. Ethylene-Glycol antifreeze in the cooling system raises the boiling temperature substantially. This makes for greater heat dissipation.
5. Antifreeze is not a waste of money if you consider risk factor alone. It is insurance that makes sense.
6. The term "permanent antifreeze" means that it may be used in the summer as well as the winter, not that it can be left in forever.

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