

MAFES Dawg Tracks

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MISSISSIPPI STATE UNIVERSITY™
MS AGRICULTURAL AND
FORESTRY EXPERIMENT STATION

*Combine Fires-A Burning
Problem*

Regardless of the situation, accident or incident, fires are horrible experiences. If you have ever experienced a fire in your home, factory buildings, and/or equipment you will never forget it. Combine and tractor fires in the USA costs over \$20 million in pure equipment losses and millions more in lost work time and lost work days. Fires not only cause huge losses in equipment, lost workdays and lost crops, but in personal injuries. Each year there are 40 to 50 serious injuries, and occasionally we hear of a fatality as the result of an equipment fire.

There are 2 keys to preventing disasters related to combating equipment fires:

- ❖ Prevention
- ❖ Preparation in case a fire does breakout

3 Items Necessary for a fire Occurrence-

- ✓ Air
- ✓ Material to burn
- ✓ Source of heat

CLEANLINESS & MAINTENANCE-

Prevention of fires in farm machinery centers on keeping the equipment clean and eliminating all sources of heat that could help fuel the fire.

- ✓ Start the season with clean equipment.
- ✓ Pay special attention to the engine compartment – 75% of machinery fires start in this area. Use a pressure washer to clean the engine compartment. A clean engine will run cooler, operate more efficiently, and will greatly reduce the potential for a fire.
- ✓ After each use, clean off the dry grass, leaves and other material with air. Check the wheels and axles for materials that might be wrapped around them.
- ✓ Pay attention to the operator's manual for instruction on proper lubrication and other maintenance issues.
- ✓ Check for leaking oil and gas lines, hoses and fittings. Replace any of the parts as needed.

ELIMINATION OF THE HEAT SOURCE-

- Check the exhaust systems for leaks, loose connections, etc. This is the most common source of fires.
- While checking the oil levels take note of the electrical wiring to see that it isn't frayed or showing signs of deterioration. Replace any worn or frayed wiring components. If you are experiencing blown fuses, there is a good chance that there may be a loose connection or a short in a connection. Arcing electrical wiring will generate sufficient heat to start a fire.
- Check the belts, bearings and chains for extreme wear. Ball bearings can get extremely hot from friction and wear, as do belts. Both of these can cause ignition and start a flame.

BEING PREPARED-

We've all heard of situations where a tractor or combine caught fire. The operator jumped off the combine and let it burn (he had fire extinguishers mounted on the outside) but elected to let the machine burn as opposed to trying to extinguish it. I'm not sure of the reasoning behind his thinking. The operator was the owner and the combine was several years old.

However, in many cases where good maintenance and good intentions are present, a machine can still catch on fire. We recommend that combines have at least 1 10-lb., Type ABC, fire extinguisher mounted on the combine (2 is better) in case one malfunctions. We recommend having a 5-lb., Type ABC extinguisher on tractors.

Operators should get in the habit of checking the extinguishers periodically to make sure that they are charged and are serviceable. Normally, they are checked by inspectors at bi-annual levels, but for extra safety, the operators should check them as well. A good idea for extra precaution and an aid to the operator-post emergency would be to have phone numbers inside the cabin a conspicuous location.

IN CASE OF A FIRE-

- ✓ Shut off the engine, grab the fire extinguisher and get off the machine, extinguish from the ground and get help.
- ✓ If you panic and forget the extinguisher, go back and retrieve it, if possible. If the fire is too large and out of control, don't put yourself in "Harm's Way."
- ✓ If you have a 2-way radio or cellphone- call for professional help.
- ✓ Approach all fires with extreme caution. This is the time to use common sense- this isn't "rocket science." Machinery fires are extremely dangerous due to the fuels, lubricants, etc. When it is possible, use the flexible hose on the extinguisher and extinguish it from a safe distance at the base of the source.
- ✓ If the fire is in a "hard to get to location" or if the fire is larger than you anticipated, don't put yourself in "harm's way. Get back to a safe distance and wait on the professionals for help.
- ✓ Before you resume the operation, find out the source of the problem and correct it.

***PUT SAFETY FIRST-
PREVENT THE WORSE!
AT HOME <> AT WORK
LET SAFETY BE KNOWN
SAFETY COMES IN CANS
I CAN<>YOU CAN<>WE CAN!***