Fire Strikes Feller Buncher During Shutdown

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To help TPA members avoid accidents resulting in injury or damage to property, the Timber Bulletin, in association with Lumbermen's Underwriting Alliance, will publish details of actual incidents and what can be done to avoid such occurrences in the future. By sharing this information, TPA and LUA hope to make our industry as safe as possible.

Background:

The winter logging season is in full swing, which comes after a very wet summer that finally hit a dry spell in the fall, and fall was when this fire loss occurred on a feller buncher. The following information comes from a personal interview with the owner, a review of the involved mobile equipment, and a discussion with the employees at the work site.

Lessons from Losses

This small logging and trucking company operates conventional logging mobile equipment. This incident occurred on a remote logging site approximately 15 to 20 road miles from the nearest town. The logging site was a mixed stand of hardwoods and conifers. The equipment involved was a track feller buncher with a hot saw. All of the mobile equipment at this logging site was equipped with 10lb multi-purpose fire extinguishers.

Maintenance and housekeeping were performed daily, but the fall cleaning/power wash had not been completed. Within the last six months the batteries had been replaced, as well as the battery cables, and within the last year the starter had been replaced. No other major maintenance problems had been noted.

Incident:

This mid-week fire situation occurred at the end of the workday during the cool down, fuel, and check-over period. The operator had walked the track unit back to the landing and had left the machine idling. In the meantime, he moved the pick-up truck with the fuel tanks closer to the parking area of this machine.

As the operator was walking around the machine he smelled something hot, maybe smoke. Upon further investigating, he saw a small amount of smoke coming from the engine compartment. He immediately shut down the equipment, including the electrical master switch, grabbed the fire extinguisher from the cab, and proceeded to open the engine side panel. As the side door opened, the fire inside the engine compartment flared up with the introduction of more oxygen.

Using the extinguisher, the operator was able to quickly knock the fire down. Even though the extinguisher appeared to be controlling the fire, he summoned the help of the skidder operator to assist. The fire was extinguished with the help of an additional fire extinguisher. After the fire, this machine was cleaned in the burnt area, and any hot areas were sprayed with the extinguisher. The work crew stayed on site reviewing and further cleaning for a considerable time after the fire situation.

Due to this fire, damage occurred to the starter, batteries (leaking battery acid), and electrical cables within the engine compartment. This area of involvement was under the manifold/turbo of the engine, next to the starter, and above the battery storage area. Proper preparation and fast response limited the amount of loss and saved this mobile equipment from a total loss.

Unsafe Act and/or Condition:

It is uncertain exactly what failed, thus igniting the fire. It is speculated that either the batteries shorted

Fire damage occurred within the lower engine compartment on this feller buncher.

The main fire was located behind the battery cover, involving the batteries and surrounding engine area.

internally and/or there was a direct short to the main battery cables leading to the starter. Housekeeping likely contributed to the fire, due to the area of this fire situation.

Please note the accompanying pictures highlighting the damaged area on the involved feller buncher. For sawmill operators, there is a picture of a recent situation of a similar nature at a sawmill involving a hydraulic unit. The possible housekeeping / maintenance breakdown involving the coupler joint between the hydraulic pump and electric motor was the hot area. Again, handheld fire protection (minimum 10lb multi-purpose fire extinguishers) were used and successfully extinguished the fire. Having an emergency action plan in place for all operations of the wood industry will make the difference in protecting your property and preventing personal injury.

PREVENTATIVE MEASURES:

1. Complete thorough self-inspections on a regular basis to maintain good housekeeping, correct maintenance problems quickly, and be sure adequate fire protection is available. Review your job site for proper equipment/supplies as well as property and personal protective items.
2. Complete emergency action training for all workers so safe, fast and reduced panic factor doesn't lead to a bad situation. Tool box safety meetings covering what to do will help preparedness. Don't overlook the sense of smell, sound of operation, and vision review with all operators.
3. Maintain a documented emergency response plan for your logging operation. The level of completeness will depend on your company size. Some points to consider, in putting this program together include:
   - Keep emergency phone numbers and communication method handy
   - Keep handy location of operations (directions to job sites)
   - Perform emergency response training for each piece of mobile equipment and/or operation
   - Utilize the onboard fire self-suppression systems if available
   - Utilize of the hand-held multi-purpose fire extinguishers
   - Hold refresher training and discussion

The batteries, electrical wiring, and starter area were damaged on this feller buncher.

This photo shows the near miss at a sawmill involving a hydraulic unit where the coupler housing was the area of concern between the electric motor and the hydraulic pump. The fire was contained inside the coupler housing.