

Lessons from Losses

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.

Forwarder Bursts into Flame Idling at the Log Landing

The mobile equipment involved in this fire situation was a forwarder with approximately 10,000 operating hours. Maintenance and housekeeping would be rated as fair. Most maintenance is completed inhouse with the large-scale maintenance completed by a local heavy equipment mechanic shop. No immediate maintenance problems were needed or completed prior to this fire emergency. This equipment was last power-washed within six weeks. Daily cleaning in hot areas was completed during the morning pre-operation check. During the warm weather season the pre-plan is to power-wash every two to four weeks and/or as needed. Also, this operation utilizes compressed air to clean weekly and/or as needed.

Temperature at the time of this fire loss reached 70. The skies were clear, sunny, and windy conditions were increasing as the day progressed. This was the first warm day during the spring thaw.

The owner/operator of this equipment is considered fully trained in operation. This individual has operated logging mobile equipment for 35 years.

Incident and/or injury:

In early afternoon the involved equipment burst into flame during operation. This incident occurred approximately 45 minutes after lunch break. During the lunch break the equipment was shut down.

The owner was operating the equipment and was idling at the log landing when he answered a telephone call while seated in the cab of this equipment. About the

time he finished the phone call he smelled something hot coming from the engine compartment. The smell wasn't electrical or wood burning. We wondered if it could be something hot/fuel.

Investigating the engine compartment, he opened the hood cover and the engine area was on fire and immediately burst into higher flames. By the time he responded with the on-board hand-



The forwarder from this incident after it was gutted by fire.

held fire extinguisher (a 10-lb. extinguisher) the flames were high on the engine near the top. As he started to extinguish the fire, the on-board starter assist canister burst and flew past, narrowly missing him. The first extinguisher slowed the fire but did not extinguish the fire. He immediately got help from his son, called 911, and gathered the extra fire extinguisher from the company pick-up to attempt to control the fire. The fire was out of control and all they could do was use the extra forwarder to blade the surrounding area to stop a possible forest fire until help arrived from the responding fire department. The fire department responded in approximately 45 minutes and extinguished the fire. The cab area, engine compartment and front tires were completely burned. There was some salvage value in the rear bunks, loader, and rear axles/tires.

Unsafe act and/or condition:

It is speculated that the fire started near the engine top and spread from that area. It is uncertain, but in that area the initial cause may have been from fuel, oil, and/or possibly debris in the manifold turbo area (fuel igniting from the hot turbo). The turbo/exhaust is partially covered with a heat resistance wrap to control excess heat. Opening the hood cover gave the fire fresh air creating a fast-growing fire situation. The following suggestions can help prevent problems of this caliber when working with mobile equipment.

Preventive measures:

1. Enforce frequent operator self-inspections for housekeeping and maintenance, especially in dirty timber. Completing these preventive maintenance repairs quickly (electrical, hydraulic/fuel hoses, part replacement, etc.) before the fact will help keep your operation profitable.
2. Install fire port holes in equipment side panels for fire extinguisher use during fire emergencies. This needs to be part of employee training and a refresher training program for emergency response.
3. Maintain all side panels on mobile equipment with quick opening fasteners. Fast access is very important in an emergency.
4. Review the hood tops to prevent debris from entering the engine compartment. This should include blocking of all openings or problem areas (rear hood, canopy openings, etc.).
5. Train employees on proper use of fire extinguishers in an emergency situation. Utilizing the extinguisher hose to direct the flow to the base of the fire so the extinguisher is not wasted in a panic situation.
6. Always shut down the electrical disconnect (master switch) on mobile equipment in an emergency situation. Refresher training for all employees needs to be reviewed regularly.
7. Complete refresher of employee training for proper operation, service, emergency response, etc., for new and existing employees. Weekly tool box safety meetings work well in reviewing all equipment. Cross training all employees is very beneficial.
8. Install an on-board fixed self-suppression system on all mobile equipment. Additional protection is always very beneficial in a fire emergency situation. Always follow the owner's maintenance manual for service and inspection of these systems. This is a very important factor in the performance of this protection.