



**DEPARTMENT OF MINERALS AND ENERGY
WESTERN AUSTRALIA**

SIGNIFICANT INCIDENT REPORT NO. 64

FIRE ON FRONT END LOADER

INCIDENT

A 1984 model 10m³ capacity wheel loader burst into flames while reversing from a ROM stockpile. The loader was feeding a primary crusher.

A truck driver, who was an eye witness, saw an explosion of flame which surrounded the cabin in seconds. The truck driver went to the loader to give assistance and found the operator on the ground and in shock. He had been burnt leaving the cabin. The ladder railings were so hot he could not touch them and was forced to jump to the ground.

CAUSE

A hydraulic hose failure is suspected. Spraying hydraulic oil, ignited by either turbo charger heat or an electrical fault, is the most probable cause of the fire. This could not be established conclusively due to the extensive damage to the machine.

COMMENT

1. There was no automatic fire fighting system fitted to the machine.
2. The machine continued to idle for two hours after the fire commenced.
3. The only escape for the operator was through the flames.
4. Excess grease, oil and the routing of hydraulic hoses at the pivot point below the cabin provided additional fuel for the fire.
5. The fire was finally extinguished nine hours after it commenced.

PREVENTATIVE ACTION

Designers/manufacturers/suppliers and owners/operators of plant on mines need to be aware of the potentially catastrophic consequences of such a fire and ensure that they comply with their statutory duties with respect to plant in terms of identification of hazards, assessment of associated risks and the elimination or effective control of those risks.

In this case, the provision of an on-board fire extinguishing system and a secondary engine cut-off switch which could be operated from a safe position on the ground beside the loader would have mitigated the effects of the fire. The provision of safe means of emergency egress from large items of mobile plant also requires consideration, particularly where (as in this case) the operator's position is some considerable distance above the ground.

J M Torlach
STATE MINING ENGINEER

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SAFETY AWARENESS SAVES LIVES