

Alert



Fires on mobile plant

Mine operators and workers must implement safety checks on mobile plant to prevent incidents involving fire.

February 2010

Background

Since January 1, 2008 there have been nine incidents involving fire on mobile plant at mines in Victoria. Seven occurred in underground mines and two in open cut mines.

Component failure or a combination of component failures, together with inadequate maintenance contributed to or caused these fires. Specifically, the fires were caused by:

- oil hoses that failed and spilled
- leaked oil onto hot engine components
- accumulated brown coal igniting electrical faults.

Control measures

Preventative control measures for vehicle operators and users:

- properly route, space and attach hoses
- routinely check hose clamps
- use fire resistant anti-static hoses whenever possible
- install insulation around hot components or insulate hoses near hot components
- upgrade to braided hoses
- routinely wash, clean and check hoses for rubbing, oily mist or leaks
- implement quality checks by manufacturer authorised service providers (eg an original equipment manufacturer) as a cross check for internal maintenance
- install fire detection and automatic fire suppression system on plant operating at a higher risk of fire
- install engine auto shutdown systems that operate when the fire suppression system is discharged
- routinely check for corrosion around solenoids and their connections
- replace/check solenoids at set engine hours or as per the manufacturer recommendation
- install protective devices for solenoids such as fuses
- routinely check electrical wiring including insulation
- consider location and rating of protective devices such as fuses
- ensure wiring control is protected against fire
- ensure the maintenance work order system includes the correct selection integrity and testing of control measures.

Advice

Operators must identify, analyse, implement control measures and review fire risks through the life cycle of mobile plant.

Refer to the *Australian Standard 5062 - 2006, Fire Protection for Mobile and Transportable Equipment* for useful and practical information on fire management including: fire types; ignition sources; potential fire hazard locations; and fire analysis and fire protection systems.

Further Information

Minerals Industry Safety and Health Centre, *Earth moving equipment safety round table* mirmgate.com.au

Department of Primary Industries NSW, *Guidelines for mobile and transportable equipment for use in mines, 2002*

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Contact details

Call us on: 1800 136 089

Email us at: info@worksafe.vic.gov.au

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