

For further information, please contact an inspector at any of our regional offices listed below.

North

303 Sevenoaks Street CANNINGTON WA 6107
Postal address: 100 Plain Street EAST PERTH WA 6004
Telephone: +61 8 9358 8079
Email: north.inspectorate@dmp.wa.gov.au

East

Cnr Broadwood and Hunter Streets KALGOORLIE WA 6433
Postal address: Locked Bag 405 KALGOORLIE WA 6433
Telephone: +61 8 9021 9411
Email: east.inspectorate@dmp.wa.gov.au

West

303 Sevenoaks Street CANNINGTON WA 6107
Postal address: 100 Plain Street EAST PERTH WA 6004
Telephone: +61 8 9358 8079
Email: west.inspectorate@dmp.wa.gov.au

OR

66 Wittenoom Street COLLIE WA 6225
Postal address: PO Box 500 COLLIE WA 6225
Telephone: +61 8 9734 1222
Email: west.inspectorate@dmp.wa.gov.au

www.dmp.wa.gov.au/ResourcesSafety

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Telephone: +61 8 9358 8154
Email: RSDComms@dmp.wa.gov.au

Mine safety matters

Underground mobile equipment fires

The advice provided in this pamphlet is basic safety and health information. Ensure you are familiar with your site procedures and, if uncertain, discuss this information with your supervisor and safety and health representative.

THE HAZARDS

Potential hazards when underground equipment catches fire include:

- falls during hurried dismounting
- failing to hit the emergency stop and point the machine to the wall
- fleeing the fire without thinking about the safest destination
- stumbling on obstacles on and near the roadway while evacuating the fire area
- remaining too close to the fire

- being overcome by smoke and fumes
- tyre explosions
- being burnt by flames or hot components
- being trapped in a blind end by the burning equipment and not being able to reach a safe haven if the self-rescuer runs out
- becoming disoriented in thick smoke.

WHAT CAN HAPPEN

Fires can occur on all underground mining equipment, and serious injury or death may result. Fires can be caused by a range of scenarios including:

- oil or fuel spraying onto hot exhaust system, hot engine components or hot brakes due to failure of hoses or fittings

- oil hoses or electrical cables routed too close to hot surfaces
- hoses or electrical cables insufficiently secured to avoid movement or vibration
- excess grease build up or oil leaks near hot surfaces
- cleaning rags or other litter left in machine interior
- fuel spraying onto hot parts when refuelling.

SAFE WORK PRACTICES

- Learn and understand the emergency abandonment procedure in case of machine fire
- Maintain mobile equipment to the manufacturer's specifications
- Install and maintain custom designed reliable fire sensing and suppression systems in all diesel equipment
- Carry out daily inspections of critical components and protection equipment

- Instigate and carry out comprehensive vehicle pre-start checks
- Only refuel at designated surface or underground refuelling locations that have appropriate fire suppression systems
- Check there is a service replacement procedure for electrical components, such as starter motors and alternators
- Ensure hoses and cables are carefully routed and securely mounted so they will not be damaged by heat, vibration or abrasion in normal service
- Remove excess grease and oil from engines
- Inspect the handheld extinguishers regularly and replace as required
- Ensure you are trained in the correct operation of all fire extinguishers
- Ensure you have a safe route to a refuge chamber or escape route in case of fire

- Familiarise yourself with the site emergency evacuation procedures
- Where a fire has been identified, park the mobile equipment off the main decline where possible, pointing the machine to the wall, and turn the engine off
- If a fire cannot be controlled, follow site emergency evacuation procedures and restrict access to the area for a period of 24 hours

IN CASE OF FIRE

- Do not panic. Carry out correct park and emergency procedure. Dismount quickly but carefully by the normal route if possible. Watch out for rough ground or rocks when you step off. Consider the situation and move carefully to the safest haven away from the fire. Stop others from approaching the fire if necessary.

- Do not stay too close to the fire. As soon as possible, after you are safe, alert emergency services to the situation. Wait for further evacuation instructions.

For further advice, refer to the *Purchase, operation and maintenance of underground diesel engine mining equipment*; *Tyre safety, fires and explosions*; and *Refuge chambers in underground metalliferous mines* guidelines available at www.dmp.wa.gov.au/ResourcesSafety



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