MARCH MAJOR HAZARD SAFETY THEME:

VEHICLE FIRES AND TYRES

Operating a vehicle is one of the most common activities on site. In this month's safety theme we look at fire and tyre incidents on vehicles and mobile equipment.

The primary area a fire is likely to occur on a vehicle, like a haul truck, is the engine compartment due to leaking fuel or loose hydraulic lines/fittings spraying oil onto hot engine components, such as the turbo. Most vehicles will have an automatic fire suppression system that consists of suppressant storage cylinders, system actuator and delivery nozzles positioned around the machine to target critical engine and hydraulic components.

Hand held fire extinguishers are also accessible in strategic places around the equipment. Only use these if safe to do so. NEVER attempt to extinguish a tyre if it is on fire as the risk of the tyre exploding is extremely high.

Some hazardous tyre conditions can lead to a tyre blow out or explosion which can propel tyre, wheel/rim components, molten rubber and other debris up to 300 meters.

- If you think a tyre is at risk of blowing out or exploding, evacuate the area and create an exclusion zone of at least 300 meters around the vehicle.
- A tyre can explode even if no flame or smoke is visible.
- Depending on the risk involved with the situation, the machine may be moved to a suitable remote location, or the area where the machine is currently positioned may need to be evacuated immediately.
- The vehicle should be parked in this safe location for at least 4.5 hours to allow the tyre to cool, before a visual inspection is carried out.

OK TEDI MINING

WHAT ARE THE RISKS

- Loss of control of the vehicle
- Overheating of tyre / tyre fire / vehicle fire
- Explosion with debris travelling more than 300 m from the source
- Hot tyres / tyre fires can create toxic gases or fumes that can result in tyre explosion
- Serious personal injury to operator, bystanders, fire/rescue personnel
- Equipment damage
- Environmental damage

Be the CONTROL not the HAZARD

BEFORE OPERATIONS

Conduct regular inspections and prestart checks including tyres. When checking tyres use your senses: look, listen, smell and feel. Check correct tyre selection, monitor tyre pressure.

Make sure fire suppression systems and fire extinguishers are mounted on vehicle and in good condition ready for emergency.

DURING OPERATIONS

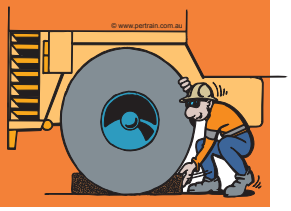
Be aware of your surroundings and operate to conditions. Monitor haul road condition, avoid ruts and debris as far as possible. Do NOT:

- drag brakes
- run equipment with under inflated tyres or on a flat tyre
- weld or otherwise heat the tyre.

If you suspect a hot tyre during operations:

- advise your supervisor immediately using the radio
- stop the vehicle in a safe location away from other equipment and buildings if possible with the suspected hot tyre facing away from work areas
- DO NOT DRIVE VEHICLE TO WORKSHOP OR ANY OTHER INHABITED AREA
- Isolate vehicle with a 300m radius.

After a vehicle fire is extinguished, isolate and monitor for a period of 24 hours to ensure there is no reignition. The tyre valve core should then be removed to verify that the tyre is no longer a hazard.



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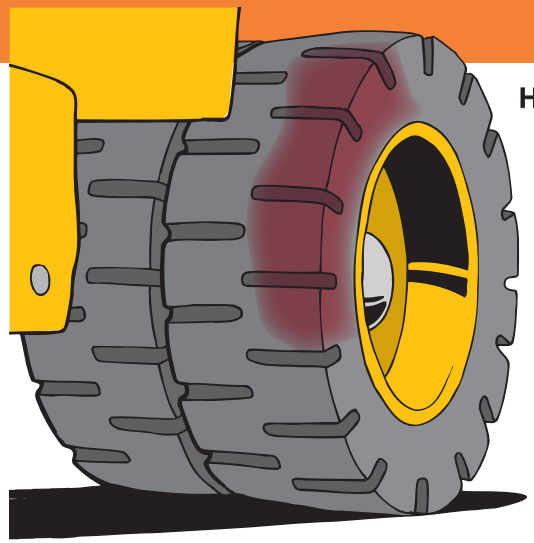
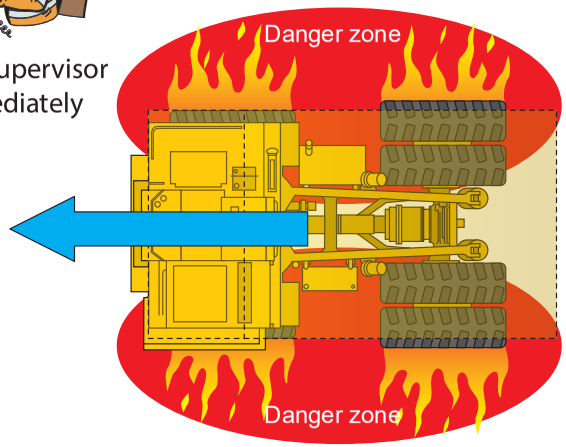


HOT TYRE PROCEDURE:

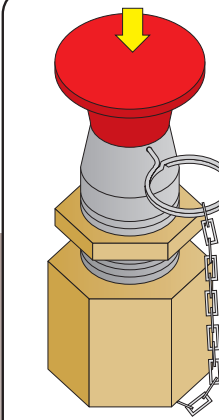
Isolate machine and allow to cool for at least 4.5 hours before maintenance do visual inspection

Radio supervisor immediately

Know the emergency exit route

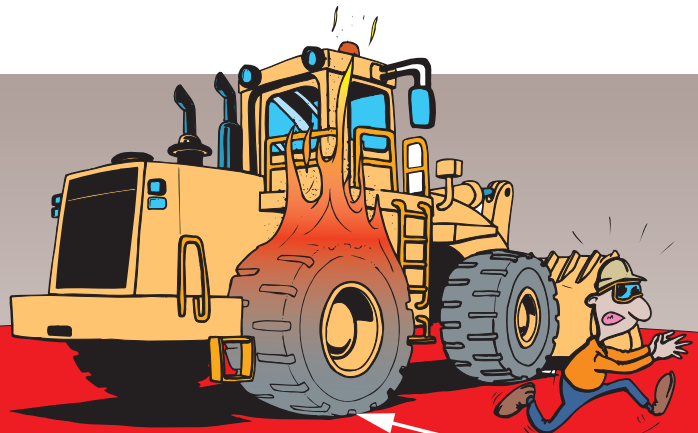


A tyre can explode even if no flame or smoke is visible Aproach from front or back, never stand facing tyre.



VEHICLE FIRE SUPPRESSION

Stop in safe area away from other vehicles/buildings
DO NOT GO TO WORKSHOP



TYRE FIRE EXCLUSION ZONE > 300m

After fire is extinguished isolate and monitor for 24 hours to ensure no re ignition

OPERATORS / EMPLOYEES

- ☐ Am I authorised, trained/re-trained, competent and licensed to operate vehicles and mobile equipment on site?
- ☐ Have I conducted a pre-operation equipment inspection to verify there are no defects including:
  - ☐ tyres in sound condition
  - ☐ no hydraulic/lubrication/oil/fuel leaks?
- ☐ If any defects have been identified, have I isolated equipment according to procedures and notified my supervisor?
- ☐ Am I aware of the site hot tyre / tyre fire procedure?
- ☐ Am I aware that if I suspect a hot tyre during operations, I am to shut down, notify my supervisor and establish a 300m exclusion zone around the vehicle?
- ☐ Do I know how to operate fire suppression system if needed?

SUPERVISORS / SUPERINTENDENTS

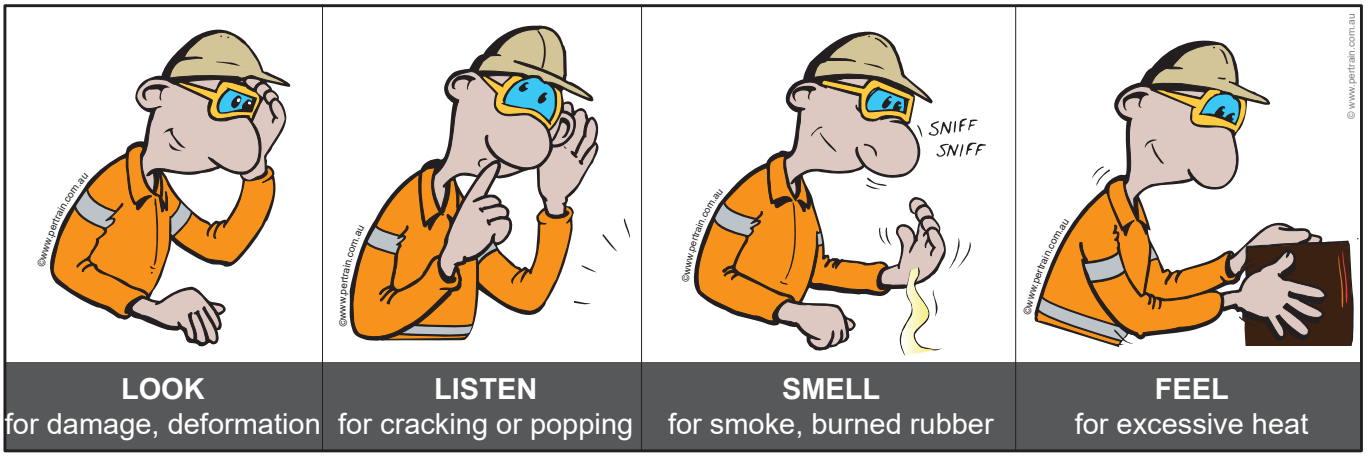
- ☐ Are all relevant persons authorised, trained/re-trained, competent and licensed to operate vehicles and mobile equipment on site?
- ☐ Are all vehicle and mobile equipment operators conducting pre-start inspections using documented checklist before each shift?
- ☐ Do pre-start checklists include looking for wear/damage to tyres, security of hydraulic/fluid hoses and couplings and pressure and operation of fire suppression systems?
- ☐ Are defects on mobile equipment identified and repaired promptly?
- ☐ Are all vehicle and mobile equipment operators aware of the hot tyre / tyre fire procedure?
- ☐ Do vehicles and mobile equipment have suitable barricading on board for establishment of a 300 metre exclusion zone?
- ☐ Do vehicles and mobile equipment have emergency stops to shut down hydraulic lines in the event of a fire?
- ☐ Are E-stops tested according to manufacturer recommendations and OTML procedures?

MANAGERS / GENERAL MANAGERS

- ☐ Are training systems in place to ensure competencies are achieved and maintained?
- ☐ Is a procedure in place for dealing with hot tyres and tyre fires?
- ☐ Are appropriate resources for emergency response available?
- ☐ Is there an inspection schedule in place to ensure vehicles and mobile equipment are correctly maintained, according to manufacturer's recommendations and OTML engineering instructions and procedures?
- ☐ Are personnel completing maintenance activities assessed as competent by the OTML Engineer Manager.

VEHICLES AND MOBILE EQUIPMENT FIRES AND TYRES KEY CONTROL CHECKLIST

USE YOUR SENSE AND YOUR SENSES WHEN INSPECTING VEHICLES AND MOBILE EQUIPMENT



LOOK	LISTEN	SMELL	FEEL
for damage, deformation	for cracking or popping	for smoke, burned rubber	for excessive heat