

SAFETY ALERT



HOT WATER FROM OVERHEATED ENGINE BURNS MINE WORKER

INCIDENT

A mine worker received serious burns from hot water when he took the radiator cap off an overheated personnel transporter.

CIRCUMSTANCES

The transporter was on hire. It regularly overheated and the mine had tried to fix the problem. The machine overheated so regularly that two 20 litre containers of water were carried on it. The water was used to refill the cooling system when the machine "went out" on overheat. The operator lifted a lever on the radiator cap to lower the hot water pressure, and then took the cap off. He did this, but the pressure had not fully lowered and hot water gushed out to a height of 300mm. It flowed over his arm and filled the glove he was wearing.

INVESTIGATION

A large volume of hot water can flow from a machine cooling system if the water pressure is not completely vented. With most radiators, it can take 5 minutes or more for the water pressure to vent.

RECOMMENDATIONS

Operators must wait for the venting of the pressure to finish completely before taking a radiator cap off.

Consider fitting a pressure gauge to show operators when it is safe to remove the radiator cap.

Under Clause 51(2) Coal Mines (General) Regulation 1999, mine managers must have mine rules in place which:

1. Prevent anyone from taking off the radiator cap from any radiator, heat exchanger or cooling system where the temperature of the cooling fluid is higher than 60^o C. Where this is not possible, make sure that ALL pressure is vented before removing the cap.
2. Make sure that mine personnel take any machine or combination of machines out of normal service where it is clear that they are likely to overheat during routine work.

R Regan
CHIEF INSPECTOR OF COAL MINES

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