

RCE/11/006  
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# Safety Alert

## Dumper Engine and Braking System Failure

A dumper operator recently sustained bruising to his back when he lost control of the vehicle.

### *Incident*

A 10 tonne forward tipping dumper cut out as it was being driven up a slope which, whilst steep, was within the vehicle's safe limit of operation.

When the engine cut out, the operator attempted to apply the footbrake, however this was ineffective, and as he did not apply the emergency brake (handbrake), he lost control of the dumper which rolled back down the slope at speed, until it came to rest against an earth stockpile.

The impact resulted in the operator bruising his back and his refraining from work for a week's rest. There were no other personnel in the immediate vicinity.

### *Investigation Findings*

- The dumper was an external hire from a major plant hire company. On a previous hire (to another customer) the dumper's hydraulic braking system was contaminated by engine oil and, whilst the owners flushed out the engine oil, they did not replace the contaminated seals which eventually leaked, causing in this instance the brakes to fail..
- The dumper had little fuel in the tank and the engine may have starved of fuel due to it being gravity fed and operating on steep ground.

- The gearbox on most dumpers will free wheel once engine power is lost and steering control will be extremely limited.
- The handbrake is independent of the hydraulic braking system and may have stopped the dumper if it had been applied.
- On the days leading up to the incident, the operator was experiencing "spongy brakes"; however he did not document this in his daily vehicle checks.

### *Learning Points and Actions*

Site Management must implement procedures to ensure:

- A thorough documented inspection of all vehicular plant by a competent person on delivery/before first use and thereafter daily in accordance with Company and manufacturers' recommended checks.
- Operators experiencing any defect affecting safe operation, to park and quarantine the vehicle until an examination can be made by a qualified mechanic.
- Dumper brakes are checked at the start of each working shift before the vehicle is put to use.
- Operators are aware to immediately apply the emergency brake (handbrake) in the event of the failure of the vehicle's hydraulic braking system.

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