

Safety Alert – Infrastructure Trailers: Coupling and Braking Systems

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1 Subject

Risk of unbraked runaway associated with coupling systems and braking systems fitted to infrastructure trolleys and trailers.

2 Issue

On 16 July 2022, a 30-ton infrastructure trailer ran away unbraked from the entrance of the new Sydney Metro City and Southwest tunnel at Sydenham, NSW for a distance of over 1.5km.



Figure 1: Runaway trailer loaded with wire coils – GVM 40t

The trailer was equipped with Ringfeder type couplings typically found on road trucks and trailers, which have a pin that drops through the drawbar ring when coupled.

The first failure, in the case of this incident, was that the pin and ring did not engage as designed and this was not detected.

As a result, the runaway trailer separated from the rest of the train and the brake pipe disconnected – an occurrence known as unintended train separation.

The second failure was that the brakes did not apply when the unintended train separation occurred.

This second failure is a breach of a basic train safety principle, namely that all braked vehicles automatically vent brake pipe air and undergo emergency brake applications in the event of unintended train separation.

The brakes did not apply because the runaway trailer was fitted with WABCO Triomatic air couplers. These couplers have an automatic seal function meant for fitment to the rear of road trucks to preserve the truck's air when the brake pipe disconnects. The fitment of this equipment to trailing rolling stock was erroneous and unsafe.

While the incident is still under investigation, the above information is provided to alert operators of infrastructure trolleys and trailers to the circumstances of the incident so that operators can examine their procedures and equipment to prevent occurrence of a similar incident.

Rail Transport Operators should examine all risks associated with operating infrastructure trolleys and trailers. Examinations should cover all types of road rail vehicles, trailers, trolleys and any other rolling stock coupled to them and not be limited to the specific type of equipment involved in this incident.

All braked vehicles in trains must undergo fail-safe automatic emergency brake applications in the event of unintended train separation. The emergency brake application must occur regardless of where the separation is, and regardless of the direction the vehicles are facing relative to each other in the train.

This advice is effective immediately

Peter Doggett

Chief Operating Officer



Figure 2: Ringfeder type coupling



Figure 3: WABCO Triomatic air couplers