

# Notice to Rail Transport Operators

## Safety Alert

Document ID:	ONRSR-1450117371-44
Rail Safety Alert No	RSA-2023-0002
Date Issued	21 December 2024

### 1 Subject

Incidents involving rail equipment manufactured and/or supplied by Manco Engineering Group (Manco).

### 2 Issue

There have been a number of safety incidents that have involved rail transport operators using equipment manufactured and/or supplied by Manco.

- On 16 July 2022, a Manco trailer had a runaway in Sydney.
  - see attached Safety Alert issued by ONRSR
- On 1 July 2023, a Manco elevated work platform (EWP) had a runaway in Auckland.
  - see attached Plant Alert / Bulletin issued by Martinus
- On 18 November 2023, a Manco EWP experienced a mechanical failure that saw workers ejected from the bucket.
  - see attached Health Safety and Environment Alert issued by Martinus
  - see attached Critical Safety Alert issued by Queensland Rail
  - see attached Safety Advice issued by Sydney Trains
- On 16 December 2023, a Manco EWP experienced an uncontrolled movement that resulted in a worker being injured.
  - see attached Safety Alert issued by Sydney Trains

These incidents are still under investigation by various authorities with final conclusions as to root causes still to be determined.

In the interests of sharing safety information, it is important the rail industry is aware of these incidents and the various documents attached to this Safety Alert. Please note that ONRSR is not endorsing or validating the information attached that has been provided by Martinus, Queensland Rail and Sydney Trains but providing it so that rail transport operators can make their own informed decisions.

All rail transport operators should immediately review the information provided to determine if it is applicable to their operations and if so, take the steps necessary to assure themselves that for identified rail equipment, the supporting systems and processes to ensure its safe use are in place.

**This advice is effective immediately.**

Peter Doggett  
Chief Operating Officer

# Safety Alert – Infrastructure Trailers: Coupling and Braking Systems

Document ID:	ONRSR-1450117371-16
Rail Safety Alert No	RSA-2022-001
Date Issued	2 August 2022

## 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 30t

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

<b>Bulletin</b>	
<b>Plant Department</b>	
<b>Doc No.: MR-PE-013</b>	<b>Version 1.0</b>

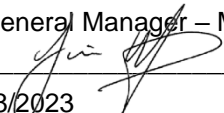
# Plant Alert / Bulletin

Please read this bulletin in full and toolbox to all relevant stakeholders.

	<table border="1"> <tr> <td><b>Title</b></td> <td>Manco EWP RRV runaway in CRL tunnel</td> </tr> <tr> <td><b>Bulletin No.</b></td> <td>PAB 2023-001</td> </tr> <tr> <td><b>Expiry Date</b></td> <td>Until withdrawn</td> </tr> <tr> <td><b>Communication Type</b></td> <td>Email / Pre-start / Toolbox</td> </tr> <tr> <td><b>Revision</b></td> <td>Issued</td> </tr> <tr> <td><b>Date Issued</b></td> <td>18/08/2023</td> </tr> <tr> <td><b>Raised by</b></td> <td>Greg Hackett</td> </tr> <tr> <td><b>Issued by</b></td> <td>Ebram Ghabbour</td> </tr> <tr> <td><b>Approved by</b></td> <td>Gavin Murphy</td> </tr> </table>	<b>Title</b>	Manco EWP RRV runaway in CRL tunnel	<b>Bulletin No.</b>	PAB 2023-001	<b>Expiry Date</b>	Until withdrawn	<b>Communication Type</b>	Email / Pre-start / Toolbox	<b>Revision</b>	Issued	<b>Date Issued</b>	18/08/2023	<b>Raised by</b>	Greg Hackett	<b>Issued by</b>	Ebram Ghabbour	<b>Approved by</b>	Gavin Murphy
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<p><b>Introduction</b></p>	<p>A Manco Mobile Elevated Work Platform (MEWP) on hire from Alpha Rail attached to City Rail Link (CRL) project had an uncontrolled movement resulting in a runaway downgradient on Saturday, 1st of July 2023 around 18:15h with two Martinus operators in the basket. The vehicle had an engine shutdown which led to the runaway for nearly 200m down the CRL tunnel before coming to a complete stop upon brake activation. CRL is a project for Link Alliance in Auckland, NZ.</p> <p><b>Applicability</b></p> <p>All Martinus projects and sites</p>																		
<p><b>Background</b></p>	<p>Leading up to the incident the operators experienced the machine overheating and reduced drive performance when operating regularly up and down tunnel gradient (1:28).</p> <p>Plant Engineering inspected the machine, reviewed hydraulic schematics, interviewed operators, and consulted with the OEM.</p> <p>Martinus is working with Manco to resolve the following areas of concern:</p> <ul style="list-style-type: none"> <li>• The design of the braking system does not meet fail-safe requirements as defined by RISSB, NRSS standards. A single valve failure has caused the failure of all 6 brakes on the machine.</li> <li>• The suitability of the Brevini drive motors. The machine experienced degradation in drive and overheating due to repeated operation on gradient. Excessive wear was found on the rotors inside the motors.</li> <li>• The ability of the cooling system to support the machine during all operating conditions.</li> </ul>																		
<p><b>Actions</b></p>	<ul style="list-style-type: none"> <li>• <b>Immediate Actions:</b> <ol style="list-style-type: none"> <li>1. Off-board (if hired) or stand down (if owned) all Manco RRVs operating on any Martinus sites or projects.</li> <li>2. Stand down all RRVs in NZ until additional brake testing (and for hydrostatic drive RRVs, hydraulic schematics reviews, and if required inspections) is complete.</li> </ol> </li> <li>• <b>Additional Actions:</b> <ol style="list-style-type: none"> <li>3. Review MR pre-acceptance status for all RS and Plant in NZ.</li> <li>4. Manco must address all open technical queries prior to any assets returning to service.</li> </ol> </li> </ul>																		

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	<p>5. KiwiRail should consider an immediate update to its codes to revise park brake performance requirements from 1 in 33 to 1 in 28 considering the gradient in CRL tunnel.</p>
<b>Duties</b>	<ul style="list-style-type: none"> <li>• <b>Supervisors and Managers:</b> <ul style="list-style-type: none"> <li>➤ Offboard (if hired) or tag out (if owned) all Manco RRVs on Martinus worksites.</li> <li>➤ Report all Manco plant to the plant department.</li> <li>➤ Stand down any hydrostatic RRVs on Martinus worksites and report them to the plant department.</li> </ul> </li> <li>• <b>Operators:</b> <ul style="list-style-type: none"> <li>➤ Report all Manco plant and hydrostatic RRVs to your supervisor.</li> <li>➤ Do not operate any Manco RRVs until further notice.</li> <li>➤ Do not operate any Hydrostatic RRVs in NZ until additional tests and updated pre-acceptance have been complete.</li> </ul> </li> <li>• <b>Plant Engineering:</b> <ul style="list-style-type: none"> <li>➤ Support projects with inspections and schematics reviews.</li> <li>➤ Close out all open technical queries with the OEM.</li> <li>➤ Ensure all required modifications have been completed prior to returning the assets into service.</li> </ul> </li> </ul>
<b>Approval to issue</b>	<p>Name: Gavin Murphy  Position: General Manager – Major Projects  Signature:   Date: 25/08/2023</p>
<b>Contact</b>	<p>For any enquiries or information in relation to this bulletin please contact any of the following:</p> <p>Dulitha Ahangama – Mechanical Plant Engineer  P: +61 433 747 321  E: <a href="mailto:dulitha.ahangama@martinus.com.au">dulitha.ahangama@martinus.com.au</a></p> <p>Ebram Ghabbour – Senior Rolling Stock Engineer  P: +61 433 099 228  E: <a href="mailto:ebam.ghabbour@martinus.com.au">ebam.ghabbour@martinus.com.au</a></p> <p>Michael Jenkins – Technical Manager  P: +61 427 368 766  E: <a href="mailto:michael.jenkins@martinus.com.au">michael.jenkins@martinus.com.au</a></p> <p>Greg Hackett – Rail Safety Manager New Zealand  P: +64 274 394 976  E: <a href="mailto:greg.hackett@martinus.co.nz">greg.hackett@martinus.co.nz</a></p> <p>Deane Morris – Plant Manager  P: +64 21 435 005  E: <a href="mailto:deane.morris@martinus.co.nz">deane.morris@martinus.co.nz</a></p> <p>Steven Crump – Rail Safety Advisor  P: 64 21 2729993  E: <a href="mailto:steven.crump@martinus.co.nz">steven.crump@martinus.co.nz</a></p>
<b>Acknowledgment</b>	<p>This bulletin has been communicated to stakeholders:</p> <p>Name: _____ Position: _____</p>

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	Signature:	Date:	
	Project / Workgroup:		
	Time:	Location:	
	Stakeholder acknowledgement that the requirements of this bulletin have been communicated and understood.		
	Name:	Signed:	Date:
	Name:	Signed:	Date:
	Name:	Signed:	Date:
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<b>FORM</b>	
<b>HSE Alert Form</b>	
<b>Doc No.:</b> MR-WF-012	<b>Version:</b> 3.0



## HEALTH SAFETY AND ENVIRONMENT ALERT

### Subject

Incident involving Manco Hi-Rail fitted with Elevated Work Platform (EWP) **(NOT A MARTINUS RELATED EVENT)**

### Background

During August 2023, Martinus experienced rolling stock irregularities with various items of Manco Plant and Plant fitted with Manco hi-rail equipment. As a result of the incidents, Martinus proactively suspended all Manco & Type 1 Hi-Rail plant from operating across the business, pending a review of each item being undertaken and ensuring all associated risks were identified and mitigated.

On Saturday, 18 November 2023, two traction linesmen were performing routine crawling maintenance activities using a Manco Hi-Rail vehicle with elevated work platform (EWP) on Queensland Rail's Network.

The Hi-Rail vehicle with EWP was on-tracked and had commenced maintenance activities on the Gold Coast line, north of Robina station. A mechanical failure occurred within the EWP, causing the linesmen to be ejected from the basket (still connected via their harnesses).

The incident resulted in the linesmen making contact with the railway track infrastructure below. As a result of the incident, both linesmen were transported to hospital for medical assessment and treatment.

Workplace Health and Safety Queensland (WHSQ) issued a non-disturbance notice to preserve the Hi-Rail vehicle with EWP involved in the incident. WHSQ have also issued a prohibition notice to stop the activity of using the Hi-Rail vehicle with EWP involved until a competent person has inspected it and the inspector is satisfied that the matters that give, or will give rise to the risk, have been remedied.

### Action Required

**Please share this Safety Alert with your respective project/team members.**

Whilst Martinus owns a Manco RRV truck fitted with an EWP in New Zealand, it has been confirmed that it is not of the same configuration as the machine involved in the mentioned incident. However, Martinus New Zealand Operations have liaised with Manco, resulting in confirmation that the machine is safe to remain in service.

Martinus do not own a machine of the same make/model in Australia that was involved in the mentioned incident, however, it is imperative that all personnel remain vigilant when onboarding plant and equipment that is owned and operated by sub-contractors and suppliers.

Prior to the introduction of any Manco plant or plant fitted with Manco equipment across all business operations, please ensure you contact the Plant Department for further advice.

**When onboarding plant, rolling stock and equipment, please ensure you adhere to the requirements detailed within *MR-PP-028 Plant Rolling Stock and Equipment On and Off Boarding Procedures* at all times.**

Revised: 1/12/2020	Authorised By: C. Boothroyd	Page 1 of 2
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<b>FORM</b>	
<b>HSE Alert Form</b>	
<b>Doc No.:</b> MR-WF-012	<b>Version:</b> 3.0



<b>Further Information</b>			
Please speak with your immediate Supervisor if you have any concerns about the HSE Alert or type of plant and equipment currently in use.			
For more Information, contact:	Ebram Ghabbour Senior Rolling Stock Engineer <a href="mailto:ebram.ghabbour@martinus.com.au">ebram.ghabbour@martinus.com.au</a>	Phone:	0433 099 228
	Mick Jenkins Technical Manager <a href="mailto:mick.jenkins@martinus.com.au">mick.jenkins@martinus.com.au</a>	Phone:	0427 368 766
Authorised by:	Gavin Murphy – General Manager, Major Projects		





# Critical Safety Alert - Queensland Rail



Workplace managers and supervisors must communicate this information to affected workers verbally within 24 hours of being received or at the start of the next shift. Safety and Environment Communication Delivery Verification Form MD-13-560 to be completed and LMS administrator to add verification to workers training history as per Safety and Environment Communications Standard MD-12-56.

Issue date: 21/11/2023

Expiry date: 21/05/2024 To be removed from the safety and environment notice board.

## Suspension of hi-rail truck vehicles with elevating work platforms (EWP) fitted REISSUED

**Attention: Asset and Maintenance Managers, Principal Contractors and Supervisors of workers that operate hi-rail truck vehicles with elevating work platforms fitted**

### Background

On 18 November 2023, two traction linesmen were performing routine crawling maintenance activities using a Manco hi-rail truck vehicle with elevating work platform (EWP).

The hi-rail truck vehicle with EWP was on-tracked and had commenced maintenance activities on the Gold Coast line, north of Robina station. A mechanical failure occurred within the EWP, causing the linesmen to be ejected from the basket (still connected via their harnesses). The incident resulted in the linesmen making contact with the railway track infrastructure below. Injuries requiring medical treatment were sustained and the linesmen were transported to hospital for treatment.

Workplace Health and Safety Queensland (WHSQ) issued a non-disturbance notice to preserve the high-rail truck vehicle with EWP involved in the incident. WHSQ have also issued a prohibition notice to stop the activity of using the hi-rail truck vehicle with EWP involved until a competent person has inspected it and the inspector is satisfied that the matters that give, or will give rise to the risk, have been remedied.

### Actions to be taken:

- Confirm all hi-rail truck vehicles with EWP fitted have been tagged out of service as detailed in MD-12-73 Lock / tag out process for plant and equipment.
- All tagged out of service hi-rail truck vehicles with EWP to be supplied for use by Queensland Rail must have an inspection undertaken by an authorised inspection company (third party) to determine fitness and suitability for use including:
  - Full 12-monthly mandatory EWP lifting inspection, as per AS2550.10:2006 - Cranes, hoists and winches - safe use. Part 10: Mobile elevating work platforms. This inspection includes load testing of the platform and confirmation of the integrity of the platform load path components.
- Provide the full inspection report for each of the hi-rail truck vehicles with EWP to be supplied for use to the Queensland Rail Plant Maintenance team for review to confirm the requirements for the safe use of mobile EWPs.
- Following this, full inspection reports are to be reviewed by Senior Management to ascertain next steps to take prior to returning any and all tagged out hi-rail truck vehicles with EWPs fitted back into use by Queensland Rail.

Manco hi-rail truck vehicles with EWP are not to be reintroduced into operation within Queensland Rail until the investigation into the failure has determined the cause of the mechanical failure and a safe solution is agreed upon by all stakeholders involved.
- For emergency situations where the use of hi-rail truck vehicles with EWP is required, a risk assessment must first be completed, and approval granted by Senior Management prior to use.

For further information contact: Luke Manttan, Senior Manager Traction Power

Issued by: Phil Clark, SEQ Assets Safety Manager

LMS course type: 134735

## Safety Advice

Sharing information to improve safety

### Target audience

Sydney Trains' workers, including contractors, plant suppliers and operators who may be using Manco Fitted EWP.



### Purpose

This Safety Advice is to inform all workers about a recent serious incident involving a Manco-fitted EWP that sustained a mechanical failure during operation in Queensland.

### The Issue

- Two workers were subject to head lacerations after falling five meters from an EWP on 18th November 2023.
- The workers were working on an overhead rail wire when the mechanical failure caused the bucket to tip.
- The workers were taken to the hospital for further treatment and assessment.

### Immediate Action Taken

Sydney Trains has undertaken a review and inspection of its Manco fleet and has directly engaged with Manco requesting further testing be undertaken to ensure the defect is not present. This review has included both internally owned and externally hired units.

Sydney Trains has identified two EWPs, which have been removed and taken away for inspection. Sydney Trains has six (6) Road Rail Vehicles (4 NMD, 2 MWD) and 2x Manitou, which are not impacted by this incident.

### What you must do if you need to procure or hire Manco-fitted EWPs

- Contact PlantHireHelpdesk [PlantHireHelpdesk@transport.nsw.gov.au](mailto:PlantHireHelpdesk@transport.nsw.gov.au).

In addition, please contact your SEQR Business Partner or Line Manager if you have any further questions.



Chadi Chalhoub

Executive Director SEQR

## Safety ALERT

Sharing information to prevent incidents

### Target audience

All Sydney Trains workers, including contractors, who interact with High Rail Truck mounted EWPs.

### The Issue

An incident involving a runaway movement recently occurred when City South Territory Electrical Infrastructure workers were conducting routine maintenance inspections on the 1500v Overhead Wiring System using a Sydney Trains managed Manco Hi Rail Truck Mounted EWP (Model SCF14).

Key elements of the incident involved the following:

- A worker in the basket operated the controls to move the machine down the track to the next work position. This resulted in the machine moving at higher speed than what was expected when the EWP mode was engaged.
- The machine did not stop when the hand control and Deadman foot pedal were released and the machine continued travelling at a speed estimated to be between 20 -25km/hr.
- The uncontrolled movement resulted in the Operator being struck by an Overhead Wiring (OHW) component.
- The Operator activated the *Emergency Stop* button, which did not stop the machine from travelling.
- It has been confirmed that the *Emergency Stop* function is not designed to include an engine shutdown.
- The machine was stopped approximately 100 metres from its original position by the Protection Officer sitting in the cab of the EWP who was able to turn the ignition key off.



(a)



(b)

Figure (a) machine involved in the incident and b) Vehicle Certification Label of the machine.

### Immediate actions taken

- The injured worker was treated at hospital to receive medical care.
- A mechanic from *Manco* (Original Equipment Manufacturer of the EWP) attended site to investigate the cause of the incident.
- Immediate suspension of all *Manco* elevated work platforms.
- A systemic safety investigation into the incident is currently underway. While those investigations are underway, the machines of the same make and model will remain grounded.
- ONRSR and SafeWork NSW have been notified.

Contact your SEQR Business Partner or Line Manager if you have any questions or contact the Plant Hire Helpdesk [PlantHireHelpdesk@transport.nsw.gov.au](mailto:PlantHireHelpdesk@transport.nsw.gov.au) if procuring Manco-fitted EWPs.



Chadi Chalhoub  
Executive Director SEQR