

RRVs (On-Rail Operation)

Warning

You cannot undertake this activity in the rail corridor unless you have completed a pre-work brief and work site protection plan.

Reference should also be made to the [Protocol for Entering the ARTC Rail Corridor](#) and the [Business Rules for Working in the ARTC Rail Corridor](#)

Minimum Personal Protective Equipment (PPE) must also be met in line with the [Personal Protective Equipment \(PPE\) Work Instruction](#).

Work Activity:	Road Rail Vehicles (On-Rail Operation)		WMS No: WHS-WI-200
Coverage:	ARTC employees, and contractors directly managed by ARTC		Version No: 2.0
Developed by:	Legislation and Regulation Manager (WHS)	Approved by:	Safety Manager
			Date Approved: 19/11/2018

<i>What are the tasks involved?</i>	<i>What are the hazards and risks?</i>	<i>What are the control measures?</i>	<i>Related Documents</i>
Road Rail Vehicle Pre-Start Inspection (before on on-railing).	<p>Persons struck by:</p> <ul style="list-style-type: none"> Moving RRV. Rail or road traffic. <p>Person losing footing when exiting or entering the RRV.</p> <p>Communication problems between workers.</p> <p>RRV:</p> <ul style="list-style-type: none"> Load movement. Roll-over. Unsafe. Striking structures. <p>Delay due to RRV breakdown or collision or becoming lost in a remote or isolated location.</p>	<p>Park the RRV on a reasonably level surface away from:</p> <ul style="list-style-type: none"> Rail traffic Road traffic <p>Apply the hand brake.</p> <p>Use three points of contact to enter and exit the RRV.</p> <p>Confirm the following:</p> <ul style="list-style-type: none"> Pre-start inspections have been conducted: <ul style="list-style-type: none"> Daily checks Weekly checks RRV: <ul style="list-style-type: none"> Is registered with the relevant RIM. In NSW, an ARTC TOC waver must be kept within the RRV - otherwise the RRV must be registered in the ARTC TOC Manual. Contains enough fuel. Contains suitable provisions for travel through a remote or isolated location, as applicable. e.g. food, blankets, water, maps. Communications system is operable and is suitable for the intended travel route. Booms, tipper bins and other fixtures are fully lowered and secured to the RRV. 	<p>Road Rail Vehicle Pre-Start Inspection Reference Guide</p> <p>Pre-Start Inspection Report – Rail Guidance System</p> <p>Conducting pre-start inspections will assist RRV drivers to control many of the hazards and risks described opposite.</p>

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<p>Determine the location for RRV On-Railing.</p>	<p>Persons struck by:</p> <ul style="list-style-type: none"> • Moving RRV. • Rail or road traffic. <p>Unsafe location.</p> <p>Person losing footing when exiting or entering the RRV.</p> <p>Pre-Work Brief and Worksite Protection Plan not completed, or not adequate for the task.</p> <p>Poor or limited visibility.</p>	<p>Choose a suitable location for on-railing:</p> <ul style="list-style-type: none"> • Use an authorised take-off, where available. • Otherwise: <ul style="list-style-type: none"> ○ Railway track should be straight, with minimal incline and level with surrounding surfaces. ○ Suitable space must be available to safely manoeuvre the RRV. ○ When using level crossings avoid heavy traffic roads and high-speed roads. <p>Apply the handbrake if the driver exits the RRV.</p> <p>Use three points of contact to enter and exit the RRV.</p> <p>Use driving lights during poor or limited visibility. e.g. between dusk and dawn, heavy rain, etc.</p> <p>Complete a pre-work brief and worksite protection plan (obtain protection for adjacent railway track(s), if these could be fouled during the on-railing process).</p> <p>Obtain the appropriate authority from Network Control to access railway track.</p>	<p>-</p>
<p>RRV On-Railing (Place RRV onto railway track).</p>	<p>Persons struck by:</p> <ul style="list-style-type: none"> • Moving RRV. • Rail or road traffic. <p>Person losing footing when exiting or entering the RRV.</p> <p>RRV:</p> <ul style="list-style-type: none"> • Derailment. • Unsafe. <p>Poor or limited visibility.</p>	<p>Apply the handbrake if the driver exits the RRV.</p> <p>Use three points of contact to enter and exit the RRV.</p> <p>Turn on the RRV's driving lights and the amber / orange flashing light or hazard lights.</p> <p>Before using level crossings:</p> <ul style="list-style-type: none"> • If possible, manually operate any level crossing warning equipment and wait until the warning equipment is fully deployed, or • Stop road and pedestrian traffic (use a stop bat), or • Wait until road and pedestrian traffic has stopped, or • Confirm there is no road or pedestrian traffic approaching. 	<p>Network Rules</p> <p>Operating Manuals and/or Safe Use Instructions</p>

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	<p>Pedestrian and road vehicles not stopping short of a passive level crossing whilst a RRV is approaching, or proceeding over, the level crossing.</p> <p>Pedestrian and road vehicles not being alerted to the presence of a RRV approaching, or proceeding over, the level crossing - due to insulated RRV wheels not being able to activate level crossing warning equipment.</p>	<ul style="list-style-type: none"> Then, proceed onto the level crossing when safe to do so. <p>Centre the RRV over the railway tracks and apply the rail guidance system to the railway track according to manufacturer instructions.</p> <p>Before moving the RRV check:</p> <ul style="list-style-type: none"> Correct alignment of the rail guidance system with the railway track. RRV tyres are aligned to the intended direction of travel. 4wd mode has been selected when slippery railway track conditions exist e.g. overgrown vegetation, snow, rain, ice, grease. One braked axle of the RRV remains in contact with the railway track or the ground until the RRV is ready for immediate departure. 	
<p>Operate RRV On-Rail (General Requirements).</p>	<p>Persons struck by:</p> <ul style="list-style-type: none"> Moving RRV. Rail or road traffic. <p>Person losing footing when exiting or entering RRV.</p> <p>RRV:</p> <ul style="list-style-type: none"> Collision. Derailment. Roll-over. Striking structures. <p>Pedestrian and road vehicles not stopping short of a passive level crossing whilst a RRV is approaching, or proceeding over, the level crossing.</p>	<p>Keep the RRV's driving lights and the amber / orange flashing light or hazard lights on.</p> <p>Persons must only travel within the RRV cab.</p> <p>Persons travelling within the RRV must wear a seat belt.</p> <p>Follow relevant Network Rules and the track authority.</p> <p>Maintain situational awareness e.g. do not read, or write on, paperwork.</p> <p>The RRV driver must not use, whilst the RRV is in motion, a:</p> <ul style="list-style-type: none"> Computer Mobile telephone (unless used in voice hands free mode and cradled) Tablet 	<p>Network Rules</p> <p>Network Rules include speed management requirements.</p>

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	<p>Pedestrian and road vehicles not being alerted to the presence of a RRV approaching, or proceeding over, the level crossing - due to insulated RRV wheels not being able to activate level crossing warning equipment.</p>	<p><u>Speed Management:</u></p> <p>Do not exceed:</p> <ul style="list-style-type: none"> • track speed limits, including temporary speed restrictions. • speed limit notices within the RRV. • speed limits specified in the applicable Network Rules. <p>Minimise speed in the following circumstances:</p> <ul style="list-style-type: none"> • Approaching and negotiating tight railway track curvatures. • Approaching: <ul style="list-style-type: none"> ○ People, animals or obstructions within the danger zone. ○ Another rail vehicle. • Poor or limited visibility. • Slippery railway track conditions. • Travelling: <ul style="list-style-type: none"> ○ In reverse. ○ Through points, switches, cross overs and tunnels. ○ Down a gradient. ○ In convoy where the driver cannot see the RRV immediately ahead. <p><u>Travelling in convoy:</u></p> <ul style="list-style-type: none"> • Heavier RRVs must lead the convoy, where possible. • Before stopping an RRV: <ul style="list-style-type: none"> ○ Advise RRVs behind that your RRV will be stopping and specify the location. ○ Ask other RRVs to reduce speed on approach. ○ Confirm the communication has been understood. ○ Maintain a separation distance that will provide enough time for the RRV to avoid a collision with the RRV immediately ahead. <p><u>Approaching and proceeding over a level crossing:</u></p> <ul style="list-style-type: none"> • RRVs must stop short of the level crossing. • If possible, manually operate any level crossing warning equipment and wait until the warning equipment is fully deployed, or • Stop road and pedestrian traffic (use a stop bat), or • Wait until road and pedestrian traffic has stopped, or • Confirm there is no road or pedestrian traffic approaching. 	

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		<ul style="list-style-type: none"> Then, proceed onto the level crossing when safe to do so. <p><u>Operation for Maintenance and Construction Purposes:</u></p> <ul style="list-style-type: none"> Complete a Pre-Work Brief. The Pre-Work Brief must consider the risk of RRV fixtures striking structures, such as bridges. 	
<p>Operate RRV On-Rail (Tipper Truck Specific Requirements)</p>	<p>Persons struck by:</p> <ul style="list-style-type: none"> Moving RRV. Rail or road traffic. <p>RRV:</p> <ul style="list-style-type: none"> Derailment. Roll over. Striking mobile plant. Striking structures. <p>Person struck by dumped materials or moving parts of the RRV.</p> <p>Workers and members of the public breathing Crystalline Silica containing dusts, such as those related to soil, ballast and other rocks.</p> <p>Workers and members of the public breathing in dusts containing other harmful contaminants.</p> <p>Foreign material in eyes.</p> <p>Electric shock.</p>	<p>Fully lower the tipper bin prior to travel.</p> <p>Maintain a separation distance of 3 metres from powerlines for voltages of up to 132KV and 8 metres for voltages greater than 132KV unless you have a suitable permit.</p> <p>Establish a suitable exclusion zone prior to tipping and loading – no person may enter the exclusion zone whilst the RRV is operating.</p> <p>During loading, ensure:</p> <ul style="list-style-type: none"> Total weight of the RRV does not exceed its GVM. Load is evenly distributed. <p>Avoid loading and tipping during heavy wind or storm conditions.</p> <p>During tipping, check from outside of the exclusion zone whether materials have become stuck in or under the tipper bin, or amongst the hydraulic equipment. Where a blockage has been identified – isolate the equipment and then, safely remove the blockage.</p> <p>Stand upwind of dust generating activities, whenever possible.</p> <p>Where a worker is directly exposed to visible dust:</p> <ul style="list-style-type: none"> Wear disposable coveralls. Wear goggles or other, suitable eye protection. Wear suitable respiratory protection, such as a P2 respirator (with a clean-shaven face). Consider showering and putting on clean clothes and shoes before returning home (showering facilities are available at ARTC provisioning centres and some offices). Wash hands and face with soap and water before eating, drinking, smoking and/or chewing gum. 	<p>Excavation WMS Plant and Equipment – Servicing / Refuelling WMS</p>

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<p>RRV breakdown or collision.</p>	<p>Persons struck by:</p> <ul style="list-style-type: none"> • Moving RRV. • Rail or road traffic. <p>Person losing footing when exiting or entering the RRV.</p> <p>RRV:</p> <ul style="list-style-type: none"> • Collision. • Derailment. 	<ul style="list-style-type: none"> • Advise Network Control and any RRVs travelling in convoy of the situation – confirm communications have been understood. • Apply the hand brake. • Use three points of contact to enter and exit the RRV. • Apply track protection, where required by the Network Rules. • Provide first aid, as needed. • Remove any injured animals / debris from the danger zone, where safe to do so. • Consider RRV recovery options. • Remove the RRV from railway track, if needed to ensure safety. • Move away from the danger zone, roads and access tracks. 	<p>Network Rules</p> <p>Plant and Equipment – Vehicle Recovery WMS</p>
<p>RRV Off-Railing (Remove RRV from railway track).</p>	<p>Persons struck by:</p> <ul style="list-style-type: none"> • Moving RRV. • Rail or road traffic. <p>Person losing footing when exiting or entering the RRV.</p> <p>RRV:</p> <ul style="list-style-type: none"> • Collision. • Derailment. • Roll-over. • Striking structures. <p>Pedestrian and road vehicles not stopping short of a passive level crossing whilst a RRV is approaching, or proceeding over, the level crossing.</p> <p>Pedestrian and road vehicles not being alerted to the presence of a RRV approaching, or proceeding over, the level crossing - due to insulated RRV wheels not being able to activate level crossing warning equipment.</p>	<p>Choose a suitable location for off-railing:</p> <ul style="list-style-type: none"> • Use an authorised take-off, where available. • Otherwise: <ul style="list-style-type: none"> ○ Railway track should be straight, with minimal incline and level with surrounding surfaces. ○ Suitable space must be available to safely manoeuvre the RRV. ○ When using level crossings avoid heavy traffic roads and high-speed roads. <p>Obtain protection for adjacent railway track(s), if these could be fouled during the off-railing process.</p> <p>Apply the hand brake if the driver leaves the RRV.</p> <p>One braked axle of the RRV must remain in contact with the railway track or the ground until the RRV is ready for immediate removal.</p> <p>Use three points of contact to enter and exit the RRV.</p>	<p>Network Rules</p>

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		<p>Before using level crossings:</p> <ul style="list-style-type: none"> • RRVs must stop short of the level crossing. • If possible, manually operate any level crossing warning equipment and wait until the warning equipment is fully deployed, or • Stop road and pedestrian traffic (use a stop bat), or • Wait until road and pedestrian traffic has stopped, or • Confirm there is no road or pedestrian traffic approaching. • Then, proceed onto the level crossing when safe to do so. <p>Remove the rail guidance system from the railway track and visually check that the rail guidance system has retracted and is secure.</p> <p>Ensure booms, tipper bins and other fixtures are fully lowered and secured to the RRV.</p> <p>Remove the RRV from the railway track.</p> <p>Advise Network Control once the RRV has left the danger zone.</p>	

References	
<p>Standards, Codes of Practice, Guidance:</p> <p>Commonwealth Work Health and Safety Regulation (Regulation 213, 214, 215)</p> <p>NSW Network Rules (some specific rules)</p> <ul style="list-style-type: none"> - ANPR 316 Track Vehicles - ANPR 748 Transferring Track Vehicles <p>VIC Network Rules, except Western VIC (some specific rules)</p> <ul style="list-style-type: none"> - Section 30 Operating Procedures – Infrastructure Works, sections 2 and 3 <p>SA, Western VIC and WA Network Rules (some specific rules)</p> <ul style="list-style-type: none"> - Code of Practice for the Defined Interstate Network, Volume 3, Part 1: Rules, Section 6 <p>ARTC Procedures:</p> <p>General Plant Requirements Pre-Start Inspection Report – Rail Guidance System Road Rail Vehicle Pre-Start Inspection Reference Guide Route Access Standard: General Information – Section 11 Track Maintenance Vehicle Registration and Operation</p>	<p>Plant / Equipment / Tools:</p> <p>RRV, including:</p> <ul style="list-style-type: none"> • Emergency worksite protection equipment as required by the applicable Network Rules: <ul style="list-style-type: none"> ○ NSW - ANPR 748 ○ VIC, except Western VIC - TA 20, Section 30, Rule 17 (e) ○ SA, Western VIC and WA - Safety Alert 71 • Provisions, when travelling to, or through, a remote or isolated area. • Rail guidance system. • Suitable communications equipment. • Traffic control equipment, if required. (i.e. stop bat). • Vigilance equipment.



References	
<p>Training Requirements:</p> <p><u>Licencing Requirements:</u> Check that workers who are assigned work operating RRVs hold the appropriate:</p> <ul style="list-style-type: none"> • road vehicle licence (a road vehicle licence is required when operating RRVs on ARTC property) • high risk work licence (where required by law) <p><u>Training Requirements:</u> Check that workers who are assigned the following work have received appropriate training.</p> <ol style="list-style-type: none"> 1. Operating RRVs. The training must include instruction around: <ul style="list-style-type: none"> • Correct inspection, set-up, basic maintenance and operation of the specific equipment to be used. This includes: <ul style="list-style-type: none"> ○ Radio communications equipment. ○ Rail guidance system. ○ RRV recovery procedures. ○ RRV. ○ Vigilance system. ○ TLIC3045 - Operate Road/Rail Vehicle. 2. Understand and apply relevant Network Rules. <ul style="list-style-type: none"> ○ TLIC2054 - Access Rail Track to Run Track Vehicle Within Defined Worksite. 3. Manually operate level crossing warning equipment, where relevant. 4. Using a stop bat to control road traffic, where relevant. RIIWH205D - Control Traffic with a Stop / Slow Bat <p>In states other than Victoria, a state roads authority traffic controller authorisation card must also be held.</p>	<p>Inspection / Testing requirements:</p> <p>The RRV and the associated rail guidance system must be inspected as per procedures on the previous page.</p>