

## 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](#).

<b>Work Activity:</b>	Road Rail Vehicles (On-Rail Operation)	<b>WMS No:</b> WHS-WI-200	
<b>Coverage:</b>	ARTC employees, and contractors directly managed by ARTC	<b>Version No:</b> 2.0	
<b>Developed by:</b>	Legislation and Regulation Manager (WHS)	<b>Approved by:</b>	Safety Manager
		<b>Date Approved:</b> 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"> <li>Moving RRV.</li> <li>Rail or road traffic.</li> </ul> <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"> <li>Load movement.</li> <li>Roll-over.</li> <li>Unsafe.</li> <li>Striking structures.</li> </ul> <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"> <li>Rail traffic</li> <li>Road traffic</li> </ul> <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"> <li>Pre-start inspections have been conducted: <ul style="list-style-type: none"> <li>Daily checks</li> <li>Weekly checks</li> </ul> </li> <li>RRV: <ul style="list-style-type: none"> <li>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.</li> <li>Contains enough fuel.</li> <li>Contains suitable provisions for travel through a remote or isolated location, as applicable. e.g. food, blankets, water, maps.</li> <li>Communications system is operable and is suitable for the intended travel route.</li> <li>Booms, tipper bins and other fixtures are fully lowered and secured to the RRV.</li> </ul> </li> </ul>	<p><a href="#">Road Rail Vehicle Pre-Start Inspection Reference Guide</a></p> <p><a href="#">Pre-Start Inspection Report – Rail Guidance System</a></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"> <li>• Moving RRV.</li> <li>• Rail or road traffic.</li> </ul> <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"> <li>• Use an authorised take-off, where available.</li> <li>• Otherwise: <ul style="list-style-type: none"> <li>○ Railway track should be straight, with minimal incline and level with surrounding surfaces.</li> <li>○ Suitable space must be available to safely manoeuvre the RRV.</li> <li>○ When using level crossings avoid heavy traffic roads and high-speed roads.</li> </ul> </li> </ul> <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"> <li>• Moving RRV.</li> <li>• Rail or road traffic.</li> </ul> <p>Person losing footing when exiting or entering the RRV.</p> <p>RRV:</p> <ul style="list-style-type: none"> <li>• Derailment.</li> <li>• Unsafe.</li> </ul> <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 <b>and</b> the amber / orange flashing light or hazard lights.</p> <p>Before using level crossings:</p> <ul style="list-style-type: none"> <li>• If possible, manually operate any level crossing warning equipment and wait until the warning equipment is fully deployed, <b>or</b></li> <li>• Stop road and pedestrian traffic (use a stop bat), <b>or</b></li> <li>• Wait until road and pedestrian traffic has stopped, <b>or</b></li> <li>• Confirm there is no road or pedestrian traffic approaching.</li> </ul>	<p><a href="#">Network Rules</a></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"> <li>Then, proceed onto the level crossing when safe to do so.</li> </ul> <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"> <li>Correct alignment of the rail guidance system with the railway track.</li> <li>RRV tyres are aligned to the intended direction of travel.</li> <li>4wd mode has been selected when slippery railway track conditions exist e.g. overgrown vegetation, snow, rain, ice, grease.</li> <li>One braked axle of the RRV remains in contact with the railway track or the ground until the RRV is ready for immediate departure.</li> </ul>	
<p>Operate RRV On-Rail (General Requirements).</p>	<p>Persons struck by:</p> <ul style="list-style-type: none"> <li>Moving RRV.</li> <li>Rail or road traffic.</li> </ul> <p>Person losing footing when exiting or entering RRV.</p> <p>RRV:</p> <ul style="list-style-type: none"> <li>Collision.</li> <li>Derailment.</li> <li>Roll-over.</li> <li>Striking structures.</li> </ul> <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 <b>and</b> 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 <b>not</b> use, whilst the RRV is in motion, a:</p> <ul style="list-style-type: none"> <li>Computer</li> <li>Mobile telephone (unless used in voice hands free mode and cradled)</li> <li>Tablet</li> </ul>	<p><a href="#">Network Rules</a></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><b>Do not exceed:</b></p> <ul style="list-style-type: none"> <li>• track speed limits, including temporary speed restrictions.</li> <li>• speed limit notices within the RRV.</li> <li>• speed limits specified in the applicable Network Rules.</li> </ul> <p><b>Minimise speed in the following circumstances:</b></p> <ul style="list-style-type: none"> <li>• Approaching and negotiating tight railway track curvatures.</li> <li>• Approaching: <ul style="list-style-type: none"> <li>○ People, animals or obstructions within the danger zone.</li> <li>○ Another rail vehicle.</li> </ul> </li> <li>• Poor or limited visibility.</li> <li>• Slippery railway track conditions.</li> <li>• Travelling: <ul style="list-style-type: none"> <li>○ In reverse.</li> <li>○ Through points, switches, cross overs and tunnels.</li> <li>○ Down a gradient.</li> <li>○ In convoy where the driver cannot see the RRV immediately ahead.</li> </ul> </li> </ul> <p><u>Travelling in convoy:</u></p> <ul style="list-style-type: none"> <li>• Heavier RRVs <b>must</b> lead the convoy, where possible.</li> <li>• Before stopping an RRV: <ul style="list-style-type: none"> <li>○ Advise RRVs behind that your RRV will be stopping and specify the location.</li> <li>○ Ask other RRVs to reduce speed on approach.</li> <li>○ Confirm the communication has been understood.</li> <li>○ Maintain a separation distance that will provide enough time for the RRV to avoid a collision with the RRV immediately ahead.</li> </ul> </li> </ul> <p><u>Approaching and proceeding over a level crossing:</u></p> <ul style="list-style-type: none"> <li>• RRVs must stop short of the level crossing.</li> <li>• If possible, manually operate any level crossing warning equipment and wait until the warning equipment is fully deployed, <b>or</b></li> <li>• Stop road and pedestrian traffic (use a stop bat), <b>or</b></li> <li>• Wait until road and pedestrian traffic has stopped, <b>or</b></li> <li>• Confirm there is no road or pedestrian traffic approaching.</li> </ul>	

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		<ul style="list-style-type: none"> <li>Then, proceed onto the level crossing when safe to do so.</li> </ul> <p><u>Operation for Maintenance and Construction Purposes:</u></p> <ul style="list-style-type: none"> <li>Complete a Pre-Work Brief. The Pre-Work Brief must consider the risk of RRV fixtures striking structures, such as bridges.</li> </ul>	
<p>Operate RRV On-Rail (Tipper Truck Specific Requirements)</p>	<p>Persons struck by:</p> <ul style="list-style-type: none"> <li>Moving RRV.</li> <li>Rail or road traffic.</li> </ul> <p>RRV:</p> <ul style="list-style-type: none"> <li>Derailment.</li> <li>Roll over.</li> <li>Striking mobile plant.</li> <li>Striking structures.</li> </ul> <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"> <li>Total weight of the RRV does not exceed its GVM.</li> <li>Load is evenly distributed.</li> </ul> <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"> <li>Wear disposable coveralls.</li> <li>Wear goggles or other, suitable eye protection.</li> <li>Wear suitable respiratory protection, such as a P2 respirator (with a clean-shaven face).</li> <li>Consider showering and putting on clean clothes and shoes before returning home (showering facilities are available at ARTC provisioning centres and some offices).</li> <li>Wash hands and face with soap and water before eating, drinking, smoking and/or chewing gum.</li> </ul>	<p><a href="#">Excavation WMS</a> <a href="#">Plant and Equipment – Servicing / Refuelling WMS</a></p>

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<p>RRV breakdown or collision.</p>	<p>Persons struck by:</p> <ul style="list-style-type: none"> <li>• Moving RRV.</li> <li>• Rail or road traffic.</li> </ul> <p>Person losing footing when exiting or entering the RRV.</p> <p>RRV:</p> <ul style="list-style-type: none"> <li>• Collision.</li> <li>• Derailment.</li> </ul>	<ul style="list-style-type: none"> <li>• Advise Network Control and any RRVs travelling in convoy of the situation – confirm communications have been understood.</li> <li>• Apply the hand brake.</li> <li>• Use three points of contact to enter and exit the RRV.</li> <li>• Apply track protection, where required by the Network Rules.</li> <li>• Provide first aid, as needed.</li> <li>• Remove any injured animals / debris from the danger zone, where safe to do so.</li> <li>• Consider RRV recovery options.</li> <li>• Remove the RRV from railway track, if needed to ensure safety.</li> <li>• Move away from the danger zone, roads and access tracks.</li> </ul>	<p><a href="#">Network Rules</a></p> <p><a href="#">Plant and Equipment – Vehicle Recovery WMS</a></p>
<p>RRV Off-Railing (Remove RRV from railway track).</p>	<p>Persons struck by:</p> <ul style="list-style-type: none"> <li>• Moving RRV.</li> <li>• Rail or road traffic.</li> </ul> <p>Person losing footing when exiting or entering the RRV.</p> <p>RRV:</p> <ul style="list-style-type: none"> <li>• Collision.</li> <li>• Derailment.</li> <li>• Roll-over.</li> <li>• Striking structures.</li> </ul> <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"> <li>• Use an authorised take-off, where available.</li> <li>• Otherwise: <ul style="list-style-type: none"> <li>○ Railway track should be straight, with minimal incline and level with surrounding surfaces.</li> <li>○ Suitable space must be available to safely manoeuvre the RRV.</li> <li>○ When using level crossings avoid heavy traffic roads and high-speed roads.</li> </ul> </li> </ul> <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><a href="#">Network Rules</a></p>

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		<p>Before using level crossings:</p> <ul style="list-style-type: none"> <li>• RRVs must stop short of the level crossing.</li> <li>• If possible, manually operate any level crossing warning equipment and wait until the warning equipment is fully deployed, <b>or</b></li> <li>• Stop road and pedestrian traffic (use a stop bat), <b>or</b></li> <li>• Wait until road and pedestrian traffic has stopped, <b>or</b></li> <li>• Confirm there is no road or pedestrian traffic approaching.</li> <li>• Then, proceed onto the level crossing when safe to do so.</li> </ul> <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><b>Standards, Codes of Practice, Guidance:</b></p> <p><a href="#">Commonwealth Work Health and Safety Regulation</a> (Regulation 213, 214, 215)</p> <p><a href="#">NSW Network Rules</a> (some specific rules)</p> <ul style="list-style-type: none"> <li>- ANPR 316 Track Vehicles</li> <li>- ANPR 748 Transferring Track Vehicles</li> </ul> <p><a href="#">VIC Network Rules</a>, except Western VIC (some specific rules)</p> <ul style="list-style-type: none"> <li>- Section 30 Operating Procedures – Infrastructure Works, sections 2 and 3</li> </ul> <p><a href="#">SA, Western VIC and WA Network Rules</a> (some specific rules)</p> <ul style="list-style-type: none"> <li>- Code of Practice for the Defined Interstate Network, Volume 3, Part 1: Rules, Section 6</li> </ul> <p>ARTC Procedures:</p> <p><a href="#">General Plant Requirements</a>  <a href="#">Pre-Start Inspection Report – Rail Guidance System</a>  <a href="#">Road Rail Vehicle Pre-Start Inspection Reference Guide</a>  <a href="#">Route Access Standard: General Information – Section 11</a>  <a href="#">Track Maintenance Vehicle Registration and Operation</a></p>	<p><b>Plant / Equipment / Tools:</b></p> <p>RRV, including:</p> <ul style="list-style-type: none"> <li>• Emergency worksite protection equipment <b>as required</b> by the applicable Network Rules: <ul style="list-style-type: none"> <li>○ NSW - ANPR 748</li> <li>○ VIC, except Western VIC - TA 20, Section 30, Rule 17 (e)</li> <li>○ SA, Western VIC and WA - <a href="#">Safety Alert 71</a></li> </ul> </li> <li>• Provisions, when travelling to, or through, a remote or isolated area.</li> <li>• Rail guidance system.</li> <li>• Suitable communications equipment.</li> <li>• Traffic control equipment, if required. (i.e. stop bat).</li> <li>• Vigilance equipment.</li> </ul>





References	
<p><b>Training Requirements:</b></p> <p><u>Licencing Requirements:</u> Check that workers who are assigned work operating RRVs hold the <b>appropriate:</b></p> <ul style="list-style-type: none"> <li>• road vehicle licence (a road vehicle licence is required when operating RRVs on ARTC property)</li> <li>• high risk work licence (where required by law)</li> </ul> <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"> <li>1. Operating RRVs.  The training must include instruction around: <ul style="list-style-type: none"> <li>• Correct inspection, set-up, basic maintenance and operation of the <b>specific equipment to be used.</b> This includes: <ul style="list-style-type: none"> <li>○ Radio communications equipment.</li> <li>○ Rail guidance system.</li> <li>○ RRV recovery procedures.</li> <li>○ RRV.</li> <li>○ Vigilance system.</li> <li>○ TLIC3045 - Operate Road/Rail Vehicle.</li> </ul> </li> </ul> </li> <li>2. Understand and apply relevant Network Rules. <ul style="list-style-type: none"> <li>○ TLIC2054 - Access Rail Track to Run Track Vehicle Within Defined Worksite.</li> </ul> </li> <li>3. Manually operate level crossing warning equipment, where relevant.</li> <li>4. Using a stop bat to control road traffic, where relevant. RIIWS205D - Control Traffic with a Stop / Slow Bat</li> </ol> <p>In states other than Victoria, a state roads authority traffic controller authorisation card must also be held.</p>	<p><b>Inspection / Testing requirements:</b></p> <p>The RRV and the associated rail guidance system must be inspected as per procedures on the previous page.</p>