



**ICW Wagon Maintenance and Repairs**

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

<b>Work Activity:</b>	<b>ICW Wagon Maintenance and Repairs</b>		<b>WMS No:</b> WHS-WI-484
<b>Coverage:</b>	Hunter Valley ARTC employees, and contractors directly managed by ARTC in Hunter Valley		<b>Version No:</b> 1.0
<b>Developed by:</b>	Mark Berthon – HV WGL Signals	<b>Approved by:</b>	General Manager, Asset Management <b>Date Approved:</b> 4/2/19

<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>
Enter Rail Corridor	Struck by Rail Traffic - Serious Injury	Complete Worksite protection plan pre-work brief. Contact relevant NCCN board and yard controller	<a href="#">Protocol for Entering the ARTC Rail Corridor</a> <a href="#">Business Rules for Working in the ARTC Rail Corridor</a> <a href="#">Pre-Work Brief Procedure</a> <a href="#">Worksite Protection Procedures</a>
Arrange for Train Isolation/ Lockout	Struck by train/crush injury	Review and sign on to the operators approved isolation plan Lock out with personal isolation lock	
	Slips, trips and falls – minor to moderate injury	Check work location for potential slip and trip hazards Take care when walking in long grass, up or down embankments Check footing is secure before weight bearing	
Working on or near exposed electrical conductors within equipment and related infrastructure	Exposure to hazardous electrical energy – death, electric shock, burns	Assume electrical installations are energised, unless proven otherwise Identify and isolate hazardous electrical energy (except when necessary to perform diagnostic and related tests, or where work is on extra low voltage circuits) Do not perform electrical work in wet or damp conditions or with damp or wet hands Ensure adequate working space. -Limit access to the work area Use insulated tools Wear insulated gloves and safety glasses for voltages above 120 volts, for diagnostic and related tests.	<a href="#">ARTC - Signalling Procedures and Forms</a> <a href="#">ARTC Electrical Procedures and Forms</a>  <a href="#">Personal Protective Equipment (PPE) Work Instruction</a> <a href="#">Electrical and Signalling SWMS</a>



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Working on cabinet/ wagon	Contact with rodents / insects/ snakes – death or infection disease transmission.	Visually inspect work area for hazards before conducting work. Avoid walking through long grass PPE long pants, steel capped ankle high boots and long sleeves First aid kit and trained first aid officer available Do not disturb snakes, if sighted warn others Do not place hands or feet into places where you cannot see them Use insect repellent, when needed.	<a href="#">Personal Protective Equipment (PPE) Work Instruction</a>  <a href="#">Electrical and Signalling SWMS</a>
	Exposure to sharp surfaces, Cuts and abrasions	Check for sharp edges. Wear cut proof gloves, when needed	
	Exposure to airborne dust – respiratory diseases, asthma, foreign body in eyes	Wear P1 or P2 respiratory protection Wear safety goggles.	
	Fall from wagon	Use steps. Three point contact when climbing or ascending from wagon	
Use of hand tools Use of electric small tools	Incorrect tools used / tools not used correctly – cuts, entanglement	Check all tools prior to use to ensure they are fit for purpose Ensure any blades or attachments are in good condition and adequately secured Check all guards are fitted and secure Check all electrical tools to ensure within current test tag Wear PPE as per the manufacturer’s instructions for the tool Keep fingers/toes away from rotating equipment Keep loose hair and clothing secure and away from rotating equipment Do not use adjustable spanners Use correct tools / tool parts for the task. Use tools according to manufacturer instructions Do not perform work unless trained to do so Use residual current devices with - protectively earthed portable electrical equipment, extension leads and power boards	<a href="#">Personal Protective Equipment (PPE) Work Instruction</a> <a href="#">Electrical and Signalling SWMS</a>
Working on and installing Batteries	Exposure to battery related explosive gases and corrosive liquids – burns, loss of sight and other injuries.	Maintain batteries according to manufacturer guidelines and type approval conditions. No hot work, smoking or other ignition sources within 3 metres of the work area Obtain and follow the safety data sheet Use insulated tools Ensure the work area is well ventilated	<a href="#">Sun Xtender PVX-2240 Data Sheet</a>  <a href="#">Sun Xtender PVX-2240t SDS</a>



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		Wear goggles or face shield Wear acid resistant gloves (when handling and refilling batteries).	
	Performing manual tasks – strains	Use correct manual handling techniques team lifts if possible Park as close to unit as practicable	
Use of ladders	Fall from height	As per WI “Heights, including work on ladders”	<a href="#">Working at Heights SWMS</a>
Using Portable Generator for Charging Battery bank	Manual Handling	Use correct manual handling techniques team lifts if possible Park as close to unit as practicable	
	Exhaust fumes	Use only in an open well-ventilated area	
	Refuelling Unsafe location for refuelling Sparks, flames, hot engine components Flammable vapours Ignition sources Unsafe handling of fuel / oil Splashes and spills Petrol Fumes	Undertake visual inspection prior to use Have a copy of the SDS available and follow safe use and PPE requirements Ensure the refuelling point is suitable and well-ventilated Ensure the machine is shut off, and allow time for machinery to cool down if possible Ensure you are using the correct fuel Ensure there are no ignition sources of open flames within 5m of the refuelling area Confirm that all fittings, hoses, terminals and tanks are in good condition and free of leaks. Avoid spilling or splashing fuel, if a spill occurs then this must be cleaned up immediately Have a spill kit available and on hand Use fuel containers with a flexi pourer (preferable if available) or funnel to reduce spills Thoroughly wash your hands and face after refuelling Refuel only in an open well ventilated area	
	Electric Shock / electrocution	Ensure electrical equipment is tested, tagged and in date	
Pack up / leave site	Manual handling Slips trips falls Sign off isolation plan	Ensure all rubbish is removed from site and placed back into vehicle for return and disposal Ensure all tools are stowed correctly and secured in vehicle Use correct manual handling techniques, use team lifting if available for heavy items Watch footing Remove Personal Lock and sign off Isolation plan	



References	
<p><b>Standards, Codes of Practice, Guidance:</b>                      ARTC – Standards and Forms  <a href="#">Protocol for Entering the ARTC Rail Corridor</a>  <a href="#">Business Rules for Working in the ARTC Rail Corridor</a>  <a href="#">ARTC - Signalling Forms and Procedures</a>  <a href="#">ARTC - Electrical Procedures and Forms</a>  <a href="#">Signalling and Electrical Work SWMS</a>  <a href="#">Personal Protective Equipment (PPE) Work Instruction</a>  <a href="#">Chemicals Work Instruction</a></p> <p>Law  <a href="#">Commonwealth Work Health and Safety Act</a>  <a href="#">Commonwealth Work Health and Safety Regulations</a> (particularly sections 144-166)</p> <p>Standards  <a href="#">AS/NZS 3000</a>  <a href="#">AS/NZS 3760 - In Service Safety Inspection and Testing of Portable Electrical Equipment</a>                      AS 2906 – Fuel Containers – Portable – Plastic and Metal</p>	<p><b>Plant / Equipment / Tools:</b></p> <p><b>Equipment</b>                      Electrical testing equipment, with insulated probes.                      Insulated tools, including screw drivers and pliers.                      Insulated, fully enclosed foot ware.                      Isolation locks, tags and related equipment.                      Ladders, including step ladders.                      Residual current devices. -Socket sets and accessories.                      Spanners (adjustable spanners are not permitted).                      Battery Charger                      Portable Generator                      Extension lead</p> <p><b>PPE</b>                      Acid resistant gloves                      Cotton, full-length shirt (with sleeves rolled down) and trousers.                      Cut proof gloves                      Insulated gloves                      Face shield and Goggles                      P1 or P2 respiratory protection.                      Safety glasses.</p>
<p><b>Training Requirements:</b>                      Rail Industry Worker Card</p>	<p><b>Inspection / Testing requirements:</b>                      Inspect equipment before use.                      Portable electrical equipment, cables and residual current devices must comply with AS/NZS 3760.</p>