







Safe Work Instruction	Issue date: 24/11/09
Brake Work-Train Isolation (Electric Fleet)	Review date: 09/01/11

Document no.	Work description		
SMS-06-SW-1153	This SWI describes the safe work practices for the isolation of Electric Fleet trains, to prevent their unexpected movement during brake maintenance		
	Scope This SWI is only for use under line management authorisation, in situations where the isolation of the Guard's Emergency Brake Valve Cock makes working on the brakes impossible (i.e. because the brakes would be locked on)		
Review date	References		
09/01/11	<ul style="list-style-type: none"> • Rail Safety Act 2008 • OHS Act 2000 • NSW OHS Regulation 2001, Part 5.4 • AS4024.1 Safeguarding of Machinery • SMS-06-PR-0173 Plant and Equipment Lock-out Tag-out • SMS-06-SW-1133 Guard's Emergency Cock Lock-Out • SMS-06-SW-0838 Pantograph Raising and Lowering • SMS-06-SW-0836 Isolating 1500V DC OH using an Annett Key • SMS-06-SW-0837 Isolating 1500v DC OH using a Supplementary Lock • SMS-12-OI-0886 Red Flagging Trains in stabling yards, depots and Maintenance Centres 		
Responsible supervisor	PPE and precautions	Competencies or qualifications	Licences or permits required
Line Manager	<ul style="list-style-type: none"> • High visibility clothing or vest • Safety Footwear • Gloves, as required 	<ul style="list-style-type: none"> • RISI • Site Specific Induction • Electrical Safety Awareness • Electrical trade, As required • Competent in the use of this SWI 	
Tools and equipment required			
Butterfly key with attached warning tag Red, Black and White Danger Tags Red Flag			
IF CONTROL MEASURES ARE NOT SUITABLE AND MAJOR CHANGES ARE NEEDED, CONDUCT A RISK ASSESSMENT AND DEVELOP NEW CONTROLS ACCORDING TO SMS-06-PR-0104 WORKPLACE RISK MANAGEMENT .			
	Warning <ul style="list-style-type: none"> • <i>The isolation provided in this SWI is an administrative (procedure) control only. Wherever possible make use of hard isolation such as described in SMS-06-SW-1133 Guard's Emergency Cock Lock-Out, SMS-06-SW-0838 Pantograph: Raising and Lowering and / or SMS-06-SW-0836 Isolating 1500V DC OH using an Annett Key</i> • <i>This SWI does not provide any protection from electrical energies. Refer to relevant electrical isolation SWI's and if required seek assistance from your Line Manager</i> • <i>All isolations must only be carried out by approved and appropriately qualified personnel</i> • <i>Plan your escape before working on trains and be alert to the sound of air recharging or signs of wheels or couplers moving and wherever possible, avoid placing any part of your body in a position that could result in injury should the train move</i> 		
Pre-isolation work	Always determine, in conjunction with relevant Line Manager, if hard isolation is available to prevent the movement of the train and/or operation of the brakes. If it can, proceed in accordance with the relevant SWI's. For example:- <ul style="list-style-type: none"> • SMS-06-SW-1133 Guard's Emergency Cock Lock-Out • SMS-06-SW-0838 Pantograph: Raising and Lowering • SMS-06-SW-0836 Isolating 1500v DC OH using an Annett Key • SMS-06-SW-0837 Isolating 1500 Volt DC Overhead supply using a Supplementary lock If not, complete four (4) Red, Black and White Danger Tags and proceed in accordance with this SWI Visually inspect that the pantograph(s) has been lowered from the overhead power supply		

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	Note <ul style="list-style-type: none">Both the front and the back of the Danger Tag must be filled in. Ensure you include your personal details (name) and specific details of the work being done, including time and dateA Danger Tag (like a red lock) is personal protection so each person protected by this SWI must complete four (4) of their own Danger Tags	
	Warning Ensure all pantographs are lowered and isolated on all cars in that area, by undertaking a visual inspection in accordance with <u>SMS-06-SW-0838 Pantograph Raising and Lowering</u> .	
Check	Visually inspect that the pantograph(s) has been lowered from the overhead power supply	
	Warning Ensure all pantographs are lowered in accordance with <u>SMS-06-SW-0838 Pantograph Raising and Lowering</u> . Visually check that the pantographs are lowered. Do not simply rely on the pantograph air pressure gauge, this will not guarantee that the pantographs are lowered. Failure to confirm that pantographs are lowered correctly may lead to serious INJURY or DEATH .	
Affixing Tags & Flags	1.	
Isolation Procedure	To ensure protection during this task, isolate the brake cylinder cock (BC) or Park Brake (PB) cylinder at the relevant end of the car and apply a personal lock and/or tag, in accordance with <u>SMS-06-PR-0173 Plant and Equipment Lock-out Tag-out</u> On motor cars, isolate the park brake (PB) and manually release park brake cylinders using park brake release wheel or release cable	
Removing Tags & Flags	Upon completion of work, only remove your own Danger Tags Remove your Red Flag, in accordance with <u>SMS-12-OI-0886 Red Flagging Trains in Stabling Yards, depots and Maintenance Centres</u>	
	Warning <ul style="list-style-type: none">Only remove your own protection. The removal of another persons tag, or another discipline's red flag could result in their injury or death	
	Note <ul style="list-style-type: none">Should a danger tag be left in place after someone has finished their work, every effort must be made to locate that person. If this is unsuccessful, the tag can only be removed by a Line Manager in accordance with <u>SMS-06-PR-0173 Plant and Equipment Lock-out Tag-out, 4.3.6</u>	
Additional controls		
Additional controls may be required, depending upon the work being carried out. Refer to the relevant SWI's		