

Fall Arrest Systems (Pole Straps)

Review date: 27/07/12

Document no.	Work description		
SMS-06-SW-0260	<p>Selection and use of pole straps for:</p> <ul style="list-style-type: none"> • work positioning with a full body fall arrest harness • limited fall arrest with a full body fall arrest harness • attached climbing with a full body fall arrest harness. <p>This system is used to ascend and descend poles and structures.</p>		
	Scope		
	Applies to all pole work in RailCorp, including where done by contractors		
Review date	References		
	<ul style="list-style-type: none"> • OHS Reg 2001 Clauses 39, 56-61 • AS1891 Industrial fall arrest systems and devices • SMS-06-GD-0240 Working at Heights • SMS-06-GD-0241 Fall Arrest Systems • SMS-06-SW-0264 Portable Ladders, Step Ladders and Step Platforms • SMS-06-SW-0256 Fall Arrest Systems (Harnesses, Lanyards and Attachment Hardware) • SMS-06-SW-0258 Fall Arrest Systems (Inspection and Maintenance) 		
Responsible supervisor	PPE and precautions	Competencies or qualifications	Licences or permits required
	<ul style="list-style-type: none"> • Full body fall arrest harness • High vis vest where required • Helmet with chin strap, where helmet is required • Non-slip footwear 	See below	N/A
Tools and equipment required			
Pole strap, Harnesses, Lanyards and Attachment Hardware			
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.			

General	 <p>Warning Pole straps are not to be used if there is the possibility of a free fall (refer to the Fall Arrest Systems guide).</p> <p>A pole strap is used to support a worker on a pole both during normal working and in the event of a restrained fall. Pole straps are to be manufactured to the requirements of AS/NZS 1891.1.</p> <p>A pole strap for use with a safety harness is to be of a type where the pole strap is secured to the safety harness by a snap hook at each end.</p> <p>The pole strap is to always be attached around the pole, or if necessary, the earth wire raiser. The strap is not to be attached to any other fitting, particularly cross arms or conductors. The pole strap is to be positioned between waist and chest height, and if any obstructions are present, the strap is to be placed above the obstruction.</p> <p>Before trusting the pole strap the user must look to make sure that the connectors are properly engaged, and must make sure they are firmly supported by leaning back in the belt or harness before releasing their hands.</p> <p>An energy absorber (lanyard) is not to be used attached to a pole strap, although they can be used when attached to a round sling for passing obstacles while climbing – see the Pole strap and lanyard system section.</p>
Identification	All equipment is to have a manufacturer's label located in a position that will remain legible during its serviceable life. The label is to include: <ul style="list-style-type: none"> • a serial number • the date of manufacture.
Manufacturer's instructions	The manufacturer must supply manufacturer's instructions with each pole strap supplied, indicating the method of fitting, adjustment, use and inspection.

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Acceptance inspection	Pole straps are to be marked with the Standards Mark certified to comply with AS/NZS 1891.1 and incorporate the features and options as ordered.	
Inspection and maintenance	Pole straps are to be inspected, tested and maintained in accordance with the Fall Arrest Systems (Inspection and Maintenance) SWI .	
Pole strap specifications	<p>General use pole straps are to comprise synthetic-fibre webbing and are to be provided with a protective sleeve to prevent excessive wear.</p> <p>Pole straps for use with chain saws, axes or other sharp implements are to be double braided polyester, 12mm in diameter and with a 6mm galvanised core.</p> <p>The length of the general use pole strap is to be 3.6m + 0.5m.</p> <p>Pole straps used for specific purposes can be of any length to meet requirements.</p> <p>Wire reinforced pole straps are to be 2.4m + 0.2m long.</p> <p>General use pole straps are to have a webbing outrigger at least 200mm long. The outrigger provides convenient adjustment for the pole strap.</p> <p>The outrigger is to have a hook at one end and a strap length adjuster at the other.</p> <p>The length adjuster is to be captive on the pole strap under all circumstances.</p> <p>The end fittings of general-use pole straps are to be fitted with double-action snap hooks with a single double-acting latch suitable for use with 22.5mm inside diameter and with 7 to 10mm section diameter D-rings.</p> <p>Wire reinforced pole straps are to be fitted a double-action snap hook with double-acting latch on one end. The other end of the strap is to be fitted with a rope adjuster to allow quick, simple and positive position adjustment of the pole strap.</p> <p>The snap hook and rope adjuster is to be suitable for use on the D-rings.</p> <p>The rope adjuster is to attach to the safety harness D-ring in a positive manner to eliminate the possibility of the rope adjuster being accidentally unclipped.</p> <p>The pole strap is to be fitted with a protective sleeve, nominally 600mm + to reduce chafing and wear.</p> <p>Elastic keepers are to be provided to allow convenient storage of the tail of the pole strap.</p>	
Single pole strap	<p>A single pole strap is to be used for ascending and descending poles and structures without obstructions.</p> <p>The equipment required is:</p> <ul style="list-style-type: none"> • a full body fall arrest harness • one pole strap. 	
Single pole strap - climbing method	<ol style="list-style-type: none"> 1. put on the harness and adjust to suit 2. attach the pole strap to the side D-ring of the safety harness and place the pole strap over the shoulder to keep the pole strap clear for climbing the portable ladder 3. ascend the ladder and on reaching the top of the ladder place the pole strap around the pole and secure the pole strap to the safety harness side D-ring 4. adjust the length of the pole strap to a comfortable length for climbing 5. if not already done, secure the head of the ladder in accordance with the Portable Ladders, Step Ladders and Step Platforms SWI 6. raise the pole strap as high as possible over the pole steps 7. climb up the pole one or two pole steps until the waist is level or just above the pole strap between the pole steps 8. repeat steps (6) and (7) above until the work position is reached. <p>Reverse the steps to descend the pole.</p>	

Figure 1 Pole strap raised above pole step

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Double pole straps	<p>Double pole straps may be used for passing obstructions when ascending or descending poles and structures.</p> <p>The equipment required is:</p> <ul style="list-style-type: none">• full body fall arrest harness• two pole straps for climbing past obstructions. <p>The pole straps are to not be identical, and should preferably be of different colours for easy identification while climbing.</p>
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**Warning**

When the double (two) pole strap system is used care is to be taken to make sure that the pole strap to be disconnected is correctly identified prior to disconnection from the safety harness side D-ring.

Double pole straps – climbing method	<ol style="list-style-type: none">1. put on the harness and adjust to suit2. attach two pole straps to the side D-rings of the safety harness and place both pole straps over the shoulder to keep the pole straps clear for climbing3. ascend the portable ladder and on reaching the top of the ladder place one pole strap around the pole and secure the pole strap to the safety harness side D-ring4. if not already done, secure the head of the ladder in accordance with the Portable Ladders, Step Ladders and Step Platforms SWI5. adjust the length of the pole strap to a comfortable length for climbing6. raise the pole strap as high as possible over the pole steps7. climb up the pole one or two pole steps until the waist is level or just above the pole strap between the pole steps8. repeat steps (6) and (7) above until the obstruction is reached9. place the second pole strap above the obstruction and attach it to the side D-ring of the safety harness10. release the pole strap below the obstruction from the side D-ring of the safety harness, place it over the shoulder and pass the obstruction11. repeat steps (6) and (7) above until the required position or another obstructions is reached12. if more obstructions are encountered repeat steps (9) and (10) above to pass the obstruction. <p>Reverse the steps to descend the pole.</p>
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Pole strap and lanyard system	A pole strap and lanyard can also be used for passing obstructions. The equipment required is: <ul style="list-style-type: none">• a full body fall arrest harness• one pole strap for normal climbing• one lanyard and round sling in accordance with the Fall Arrest Systems (Harnesses, Lanyards and Attachment Hardware) SWI.
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Pole strap and lanyard – climbing method	<ol style="list-style-type: none"> 1. put on the harness and adjust to suit 2. attach the pole strap to the safety harness side D-ring and the lanyard to the dorsal extension or front restraint / rescue point of the safety harness. Place the lanyard and pole strap over the shoulder to keep them clear for climbing 3. clip the round sling to a convenient place on the safety harness 4. ascend the portable ladder and on reaching the top of the ladder place the pole strap around the pole and secure the pole strap to the safety harness side D-ring 5. secure the head of the ladder in accordance with the Portable Ladders, Step Ladders and Step Platforms SWI 6. adjust the length of the pole strap to a comfortable length for climbing 7. raise the pole strap as high as possible over the pole steps 8. climb up the pole one or two pole steps until the waist is level or just above the pole strap between the pole steps 9. repeat steps (7) and (8) until the obstruction is reached 10. when the obstruction is reached install the round sling as a choker sling around the pole as high as can be reached above the obstruction 11. attach the lanyard hook to the choker sling 12. release the pole strap from the safety harness side D-ring and remove it from below the obstruction 13. place the pole strap around the pole above the obstruction and reattach it to the safety harness D-ring 14. disconnect the lanyard hook from the round sling and place it over the shoulder 15. remove the round sling from the pole and clip it to a convenient place on the safety harness 16. repeat steps (7) and (8) until the required position is reached. 17. if more obstructions are encountered repeat steps 10-15 <p>Reverse the steps to descend the pole</p>	
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Figure 2 Lanyard attached to choker sling around pole above crossarm

Training	<p>Training in the positioning of pole straps when working on poles is an important requirement. The pole strap is to always be attached around the pole, or if necessary, the earth wire raiser. The strap is not to be attached to any other fitting, particularly cross arms or conductors. The pole strap is to be positioned between waist and chest height, and if any obstructions are present, the strap is to be placed above the obstruction.</p> <p>Before working at heights, RailCorp employees and contractors are to be properly trained in:</p> <ul style="list-style-type: none"> • the method of working at heights to be used • an understanding of the particular task requirements and any hazards and risks involved • correct selection, fitting, use, care and storage of: <ul style="list-style-type: none"> - fall prevention systems and arrest equipment - personal protective equipment - tools and equipment to be used • procedures in the event of an emergency such as rescue, accident or injury. <p>Users of fall arrest systems and equipment are to be trained and assessed as competent before being allowed to work without direct supervision in accordance with training requirements defined in the Working at Heights guide.</p> <p>Line Managers are to make sure that employees are properly trained and possess the above competency.</p>
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Additional controls