Inspect Weight Tensioner

SWMS number:

SMS-06-SW-0511 (Version 1.2)

SWMS Name:

Inspect Weight Tensioners

SWMS Team:

Mains Team Manager South

Mains Team Leader, and OH&S Rep South

Mains Team Leader, and OH&S Rep North

Technical Specialist, Safety and Training

Project Manager Electrical Improvement

Custodian (Position):

Electrical Safety Officer
Infrastructure Division

Assumptions:

- The work will be carried out with the 1500V DC Overhead Wiring live.
- There will be no Electrical Permit or Outages sought for weight inspection works, except in the discretion of the Team Leader to carry out inspection work safely

Content reviewed by Technical expert (SME) and RailCorp safety professional

Electrical Safety Officer
Infrastructure Division

Approving Authority (Position):

General Manager, Infrastructure Division

Plant/Equipment/Tools:

- Approved Insulated Stick with Hook
- Block & Tackle
- Thermometer
- Binoculars

Records/Reporting:

- Applicable Maintenance Sheet
- TEAMS 3

Permits/licences required:

See assumption above.

Applicable Standards, Codes of Practice and guidance:

- EC14 – Guide to Electrical Workers' Safety Equipment
- SMS-06-SW-0256 Fall Arrest Systems (Harnesses, Lanyard and Attachment Hardware)
- AS2089:2008 Sheave block for lifting purpose
- ETN01/11 dated 4.9.2001

Inspection requirements:

- Pre-check tools
- Block & Tackle maintained as per AS2089:2008 Appendix "C"

Service schedule:

- Team Leader
- E08004

MIMS or METRE Ref:

Nil

Training/Qualifications required:

Qualified electrical workers as described in SMS-11-GD-0244 Personnel Certifications - Electrical Authorisation

PPE required:

As per SMS-06-GD-0323

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Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed In accordance with (name associated documentation)
A. BLOCK AND TACKLE METHOD							
1	Moving to and from site	Slips trips falls	C+ F4C2	Check hazardous locations register and avoid identified hazards Assess site and manage hazards	C- F3C2	Team Leader	
2	Worksite near steep fall	Fall from heights (i.e. slipping down the slope and not falling from the pole top)	C+ F3C3	Check hazardous locations register and avoid identified hazards Approved access e.g. stairs, ramp, pathway	C- F1C2	Team Leader	
3	Pulling weight stack by Block and Tackle	Muscular Stress	D F3C1	N/A		Team Leader	
		Loose stack or system element falling	C- F3C2	Visually inspect weight system for loose elements and signs of corrosion Hard hat Stand away from weight stacks & then pull the loose end of rope	D F1C2	Team Leader	
		Catenary or contact wire coming loose	C- F3C2	Visually inspect terminations Visually inspect wearing of wires Stand away from weight stacks & then pull the loose end of rope	D F1C2	Team Leader	
		Swaged sleeve coming loose	C- F3C2	Visually inspect Identify signs of corrosion and determine safety of carrying out this testing procedure Stand away from weight stacks & then pull the loose end of rope	D F1C2	Team Leader	
		Bottom plate coming loose	C- F3C2	Visually inspect Identify signs of corrosion and determine safety of carrying out this testing procedure	D F2C2	Team Leader	

Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed In accordance with (name associated documentation)
		Various holding pins coming loose	C- F3C2	Can not visually inspect all pins 4 yearly hands on inspections Stand away from weight stacks & then pull the loose end of rope	D F2C2	Team Leader	
		Weight stack falling	C+ F3C3	Pre-plan escape route Position one-self with care Stay clear of weight stacks	C- F2C3	Team Leader	
4	Carrying weight of block & tackle	Muscular Stress	C- F3C2	Manual Handling Training	D F2C2	Team Leader	
5	Working at heights (ladders)	Falling from height	C+ F3C3	Follow correct climbing procedures	D F2C2	Team Leader	SMS-06-SW-0256 Fall Arrest Systems
B. INSULATED STICK AND HOOK METHOD							
1	Moving to and from site	Slips trips falls	C+ F4C2	Check hazardous locations register and avoid identified hazards Assess site and manage hazards	C- F3C2	Team Leader	
2	Worksite near steep fall	Fall from heights (i.e. slipping down the slope and not falling from the pole top)	C+ F3C3	Check hazardous locations register and avoid identified hazards Approved access e.g. stairs, ramp, pathway	C- F1C2	Team Leader	SWI: Fall Arrest Systems (all)
3	Rocking weight stack by stick/hook	Muscular Stress	C+ F4C2	Manual Handling Training	C- F3C2	Team Leader	
		Loose stack or system element falling	C- F3C2	Visually inspect weight system for loose elements and signs of corrosion Hard hat Stand away from weight stacks & then pull the loose end of rope	D F1C2	Team Leader	

Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed In accordance with (name associated documentation)
		Catenary or contact wire coming loose	C- F3C2	Visually inspect terminations Visually inspect wearing of wires Stand away from weight stacks & then pull the loose end of rope	D F1C2	Team Leader	
		Swaged sleeve coming loose	C- F3C2	Visually inspect Identify signs of corrosion and determine safety of carrying out this testing procedure Stand away from weight stacks & then pull the loose end of rope	D F1C2	Team Leader	
		Bottom plate coming loose	C- F3C2	Visually inspect Identify signs of corrosion and determine safety of carrying out this testing procedure	D F2C2	Team Leader	
		Various holding pins coming loose	C- F3C2	Can not visually inspect all pins 4 yearly hands on inspections Stand away from weight stacks & then pull the loose end of rope	D F2C2	Team Leader	
		Weight stack falling	C+ F3C3	Pre-plan escape route Position one-self with care Stay clear of weight stacks	C- F2C3	Team Leader	
5	Carrying weight of stick & hook	Muscular Stress	C- F3C2	Manual Handling Training	D F2C2	Team Leader	
C. TEMPERATURE SCALE METHOD							
1	Moving to and from site	Slips trips falls	C+ F4C2	Check hazardous locations register and avoid identified hazards Assess site and manage hazards	C- F3C2	Team Leader	

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2	Worksite near steep fall	Fall from heights (i.e. slipping down the slope and not falling from the pole top)	C+ F3C3	Check hazardous locations register and avoid identified hazards Approved access e.g. stairs, ramp, pathway	C- F1C2	Team Leader	SWI: Fall Arrest Systems (all)
3	Reading temperature scale	Muscular Stress	D F1C1	N/A		Team Leader	
		Loose stack or system element falling	C- F3C2	Visually inspect weight system for loose elements and signs of corrosion Hard hat Stand away from weight stacks & then pull the loose end of rope	D F1C2	Team Leader	
		Catenary or contact wire coming loose	C- F3C2	Visually inspect terminations Visually inspect wearing of wires Stand away from weight stacks & then pull the loose end of rope	D F1C2	Team Leader	
		Swaged sleeve coming loose	C- F3C2	Visually inspect Identify signs of corrosion and determine safety of carrying out this testing procedure Stand away from weight stacks & then pull the loose end of rope	D F1C2	Team Leader	
		Bottom plate coming loose	C- F3C2	Visually inspect Identify signs of corrosion and determine safety of carrying out this testing procedure	D F2C2	Team Leader	
		Various holding pins coming loose	C- F3C2	Can not visually inspect all pins 4 yearly hands on inspections Stand away from weight stacks & then pull the loose end of rope	D F2C2	Team Leader	
		Weight stack falling	C+ F3C3	Pre-plan escape route Position one-self with care Stay clear of weight stacks	C- F2C3	Team Leader	

Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed In accordance with (name associated documentation)
D. ROCKING WEIGHT STACK BY HAND METHOD							
1	Moving to and from site	Slips trips falls	C- F3C2	Check hazardous locations register and avoid identified hazards Assess site and manage hazards	D F2C2	Team Leader	
2	Worksite near steep fall	Fall from heights (i.e. slipping down the slop and not falling from the pole top)	C+ F3C3	Check hazardous locations register and avoid identified hazards Use Harness / restraint	D F1C2	Team Leader	
3	Rocking weight stack by hand	Muscular Stress	C+ F4C2	Manual Handling Training	C- F3C2	Team Leader	
		Loose stack or system element falling	C- F3C2	Visually inspect weight system for loose elements and signs of corrosion Hard hat Stand away from weight stacks & then pull the loose end of rope	D F1C2	Team Leader	
		Catenary or contact wire coming loose	C- F3C2	Visually inspect terminations Visually inspect wearing of wires Stand away from weight stacks & then pull the loose end of rope	D F1C2	Team Leader	
		Swaged sleeve coming loose	C- F3C2	Visually inspect Identify signs of corrosion and determine safety of carrying out this testing procedure Stand away from weight stacks & then pull the loose end of rope	D F1C2	Team Leader	
		Bottom plate coming loose	C- F3C2	Visually inspect Identify signs of corrosion and determine safety of carrying out this testing procedure	D F2C2	Team Leader	

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Number	Step	**Hazard or human error** (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	**Risk ranking before controls**	**Control (**to be Implemented to eliminate or reduce the risk to the lowest practicable level**)**	**Risk ranking after controls**	**Responsibility**	**Job step to be completed In accordance with (**name associated documentation)
		Various holding pins coming loose	C- F3C2	Can not visually inspect all pins 4 yearly hands on inspections Stand away from weight stacks & then pull the loose end of rope	D F2C2	Team Leader	
		Weight stack falling	C+ F3C3	Not possible to clear site in time	C+ F3C3	Team Leader	

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NOTE: Each work group or team member must sign off on the SWMS to acknowledge they have been briefed about or instructed in the SWMS

Team member name (Please print)	Team Member signature	Instructor/ Briefer name	Date	Team member name (Please print)	Team Member signature	Instructor/ Briefer name	Date

RailCorp Level 2 Risk Matrix - Regional & Local (Workplace)		Likelihood/Frequency						
		Event Frequency	Less than once every 1000 years	Once every 100 to 1,000 years	Once every 10 to 100 years	Once every 1 to 10 years	More than once per year up to and including 10 times per year	More than 10 times per year
		Historical (Likelihood)	Unheard of in the rail industry	Has occurred once or twice in the rail industry	Has occurred many times in the rail industry, but not in NSW	Has occurred once or twice in NSW	Has occurred frequently in NSW	Has occurred frequently at specific locations
		Workplace Predictive (Likelihood)	Not expected to occur	May occur only in exceptional circumstances	Could occur at some time but not likely	You would expect it to occur at least once in the next 10 years performing similar activities	You would expect it to occur at least once this year performing similar activities	You would expect it to occur at least once this month performing similar activities
			F1	F2	F3	F4	F5	F6
Consequence			Incredible	Improbable	Remote	Occasional	Probable	Frequent
>10 Fatalities	C6	Disastrous	B-	B+	A	A	A	A
2-10 Fatalities	C5	Catastrophic	C+	B-	B+	A	A	A
1 Fatality (2-10 Major Injuries)	C4	Critical	C-	C+	B-	B+	A	A
1 Major Injury	C3	Major	D	C-	C+	B-	B+	A
1 or more Minor Injuries	C2	Minor	D	D	C-	C+	B-	B+
First aid treatment, or illness/injury not requiring treatment	C1	Negligible	D	D	D	C-	C+	B-

Extreme
High
Medium
Low

Definition for Use - Regional & Local level (Workplace)

Used for workplace hazards and safety risks that do not consider the whole of the network. Indicatively this matrix is appropriate for use where the hazards under consideration are up to 10% of the total network exposure. This includes regional and local workplace risk assessments.

As an example, the Level 2 scale would be used when examining the risk of slips, trips and falls on specific RailCorp platforms within a region or at a particular station, or the risk of fire within a depot.

There are 3 options for descriptors which can be used to determine the frequency category. One set of descriptors is provided for frequency, one for historical likelihood, and one for predictive liklihood in the workplace. Choose the most appropriate.

To score the risk, follow the steps:

1. Identify the magnitude of the credible consequence if the risk were to occur. If applicable, risks should be considered in terms of the safety (this matrix), commercial and environmental impact (using other matricies).

2. Identify the likelihood of this level of consequence occurring. (This is done after considering the effectiveness of the current controls in place)

3. Score the risk using the combination of likelihood and consequence ranking.

Note: Where there are a range of credible consequences which may lead to a different level or risks and/or where the controls may be different. It may be useful to score the risk more than once.