

STRTA-10

Dept. Name: Engineering Workshop	RA no*:	Rev No.*	Date:	
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Work / Activity Details: . Lifting of coach and removal/refitting bogies.

Sect.1. Risk Assessment Table

Sub Task/Activity	Hazards Identified	RA Criteria (People/Environment/ Property/Process)	Consequences	Existing Control Measures	Severity** Rating (A) of consequences with existing controls	Likelihood** Rating (B) (Refer Table in Sect.2)	Risk Level**	Additional Controls (if any)	Person Responsib le	Agreed time	New Severity	New Likelihood Rating(B1)	Residual Risk	Decision to
Lifting Equipment	Failure	People . Property	Injury. Damage to property.	Lifting equipment has valid certification.	3	3	9				3	2	6	Y
				Lifting equipment inspected prior to use. Jacks filled with hydraulic oil and no leakages.	3	3	9	Defective lifting equipment to be quarantined. Jacks to be repaired and tested.			3	2	6	Y
Use pf packing blocks.	Not suitable	People, Property	Injury. Damage to property.	Ensure packing blocks (Hardwood Sleepers and other wood packing) are in good condition.	3	2	6	Check condition of packing prior to use						Y
Jacking up of coach	Coach rolling/ shifting	People	Injury	Ensure scotch's fitted below wheels.	3	2	6							Y
Bogie attachments to chassis	Bogies lifting from the track	People	Injury	Ensure the bogie swivel pin securing arrangements are disconnected. Ensure brake system is disconnected from the chassis	3	2	6							Y

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	Uneven lifting	People, Property	Injury. Damage to property.	When lifting, continuous measuring of coach ends to ground to ensure the coach is being lifted evenly.	3	2	6	People not involved in lifting operations to be clear of work area.						Y
Adjustment of jacks close to end of stroke.	Coach heeling over	People, Property	Injury. Damage to property.	Packing blocks to be fitted below coach ends and jacks released slowly until the coach has landed on the blocks. Jacks can be removed, packing fitted below jacks to increase height and lifting operation continues again until final height reached.	3	3	9	Ensure packing blocks are of same height are used on both side to prevent uneven landing.			3	2	6	Y
End of lifting operations and securing elevated coach.	Movement of coach	People, Property	Injury. Damage to property	Ensure packing blocks are positioned at the coach ends are of same height prior to lowering of coach. Jacks to be released slowly until the coach has landed on the blocks. Checks to be made to ensure both side of the coach are hard down on the blocks.	3	2	6							Y
Moving bogie from below the coach	Fouling underside of the coach	People	Injury	Ensure staff involve are moving the bogie by pushing on the lower	2	2	4							Y

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				ends of the bogie frames, well clear of the chassis.										
Fitting refurbished bogies and securing to the coach is reverse procedure of above.														

- *Numbering guidance: a. New RA No. if it is a fresh case. b. Old RA No. with new date if no change is hazards. c. Old RA No. inserting Rev. No & new date if there are additional Hazards
- ** Refer RA Matrix (Sect. 2 Table 1,2,3, of this Form for Hazards / Consequences Evaluation (Likelihood/Severity) to People, Environment and/or Property / Commercial aspects as applicable to arrive at ratings of (A) & (B).
- *** Refer Risk Level table (Sect.2 Table 4 of this form)). If results are either in yellow or red consider additional measures to mitigate the risk.
- 'Contingency Plans' to limit the impact of unplanned occurrences/ failure of control measures to be discussed and recorded in the section below.
- During review of the RA process, if scope for improvement of the documented HSE procedure for the operation/activity is identified, same should be recorded in the comments section below.

Contingency Plans :

Comments :

Signed:

Reviewer's Comments:

Signed:

Name / Position / Signature

Date

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SECT 2: Risk Ranking Matrices & Risk Level Tables

				(Severity of)Consequence-A							
TABLE 1 : - PEOPLE		FAC: First Aid Case	LTI: Lost Time Incident	Hospital: Injury requiring Hospitalization or LTI >24hours	Perm Disability: Injury resulting in permanent disability	Fatality: Injury resulting in death					
<u> </u>		Rating	1	2	3	4	5				
d Of	Happened several times per annum in a location/ship (Very likely)	5	5	10	15	20	25				
00 Ja	Happened several times per annum within the company (Likely)	4	4	8	12	16	20				
Ed ii	Happened within our company at least once (Unlikely)	3	3	6	9	12	15				
ikelihood onsequer B	Heard Within the industry (Highly unlikely)	2	2	4	6	8	10				
'⊐ ც	Never heard within the industry (Almost NIL chances)	1	1	2	3	4	5				

	TABLE 2: PROPERTY / COMMERCIAL			(Severity of)Consequence-A							
TABLE 2: PROPERTY / COMMERCIAL		GBP 10. Damage to property/equipment	GBP 50. Damage to property/equipment	GBP 100. Damage to property/equipment	GBP 500. Damage to property/equipment	GBP 1000 Damage to property/equipment					
<u> </u>		Rating	1	2	3	4	5				
d Of	Happened several times per annum in a location/ship (Very likely)	5	5	10	15	20	25				
a de la	Happened several times per annum within the company (Likely)	4	4	8	12	16	20				
seq	Happened within our company at least once (Unlikely)	3	3	6	9	12	15				
ike	Heard Within the industry (Highly unlikely)	2	2	4	6	8	10				
'⊐ ც	Never heard within the industry (Almost NIL chances)	1	1	2	3	4	5				

TABLE 3:			(Severity of) Consequence (To be defined)\#* - A							
RA - MATRIX FOR MOC		Negligible	Minor	Moderate	Major	Catastrophic				
poor		Rating	1	2	3	4	5			
Likeliho	Very likely	5	5	10	15	20	25			

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Likely	4	4	8	12	16	20
Unlikely	3	3	6	9	12	15
Highly unlikely	2	2	4	6	8	10
Almost NIL chances	1	1	2	3	4	5

Table 4:	Meaning	Action
Risk Levels		
1 - 7	Tolerable	Risk is acceptable and job can be undertaken. Consideration may be given for further reduction of risk if reasonably possible. However, in case value is above 4, continuous monitoring
		is required to ensure existing controls are maintained.
8 - 11	Moderate	Efforts are to be made to reduce the risk by placing additional controls with an aim to bring down Risk Level to Green zone.
12 - 25	Substantial	Efforts are to be made to reduce the risk to green/yellow rating by placing additional controls and taking appropriate action as defined above. However, If the final risk level is in the red zone then no job shall be undertaken. Until the final risk level is reduced so that it is no longer in the red zone the job shall not be undertaken."