SCANIA 124G METAL SPREADER

Mobile Plant Maintenance METAL SPREADER Risk Assessment

Refer to Manufactures General Safety Instructions and Manufacturers Operations Manuals for correct Operations and identification to items and location of risk areas

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HAZARD CATEGORY AND EXAMPLES	POTENTIA	L HAZARD	WHERE ON THIS PLANT DOES THIS HAZARD EXIST?	PRELIMINARY RISK RATING	CONTROLS	RESIDUAL RISK RATING
	YES	NO	MAZARD EXIST:	KISK KATING		KATING
Mechanical hazards (ie crushing, draw in, enta	nglement, sh	earing, frict	ion or impact)			
Nip points: Including parts of plant opening, closing or collapsing. Tooling & equipment used for maintenance.		NO	Potentially all areas while conducting Maintenance or inspections on Plant.	19	>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >Process - Inspect & Maintain Tooling >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Decals & warning singe in areas of potential hazard >Fit for purpose tools >PPE	7
In-running rollers/gear sets		NO			D (
Crushing Entrapment: Plant opening, closing or collapsing. Tooling & equipment used for maintenance.	YES		Potentially all areas while conducting Maintenance or inspections on Plant.	20	>Reference to OEM Operation & Maintenance Manuals >Only Competent Trained personnel to carry out Maintenance >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >Process - Inspect & Maintain Tooling >Process - Jack and Support Equipment >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Decals & warning singe in areas of potential hazard >Fit for purpose tools >PPE	12
Crushing Entrapment:	YES		While working on Plant powered up under test or trouble shooting	19	>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >Process - Jack and Support Equipment >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Decals & warning singe in areas of potential hazard >Fit for purpose tools >PPE	7
Crushing, lacerations and severing of fingers/body parts by heavy objects, components, parts or items under pressure/power	YES		Hydraulic pressing/pushing and jacking equipment Hydraulic power tools, Liquids/gas under pressure, vacuum, elastic energy. Installing guards, aligning machinery components	19	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >Stored energy will be identified in Job specific Risk Assessment >Process - Isolation & Tagging (WA) >SHEWMS >Only Competent Trained personnel to carry out Maintenance & operate tooling >PPE	7

Trapping: Between plant and materials or fixed structures	YES		Plant / site / buildings	20	>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Enter Mobile Plant Workshop & Facilities >Process - Move & Park Mobile Equipment at the Mobile Plant Workshop	7
					>SHEWMS >Only Competent Trained VOC'd personnel to Operate Machinery >Decals & warning singe in areas of potential hazard >PPE	·
Body or body parts caught between moving components	YES		Potentially all areas while conducting Maintenance or inspections on Plant.	19	>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >Process - Mechanical lock out Mechanical Isolation >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Decals & warning singe in areas of potential hazard >PPE	7
Entanglement: Body parts, hair, tools, jewellery, clothing.	YES		Potentially all areas while conducting Maintenance or inspections on Plant.	19	>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Decals & warning singe in areas of potential hazard >Guarding provided on machinery where required >PPE	7
Friction due to contact with moving parts, surfaces or materials		NO				
Accumulation of energy inside machinery with accumulators or stored energy	YES		Engine cooling systems, tyres	20	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >Stored energy will be identified in machine specific Risk Assessment >Process - Maintain Accumulator Systems >Process - Isolation & Tagging (WA) >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Warning signage on all accumulator systems >All systems are to be "vented" prior to performing maintenance on that system. >PPE	7
Unplanned dropping: Implements, components, parts, tooling, equipment used for maintenance.	YES		Potentially all areas while conducting Maintenance or inspections on Plant.	20	>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >Process - Inspect & Maintain Tooling >Process - Jack and Support Equipment >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Decals & warning singe in areas of potential hazard >Fit for purpose tools >PPE	7

Mechanical Hazards - Movement of Plant						
Plant stability, tipping or falling over during			Potential when supporting plant on		>Reference to OEM Operation & Maintenance Manuals	
jacking operations			stands		>Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits	
	YES			19	>Process - Isolation & Tagging (WA)	11
	TES			19	>Process - >Jack and support equipment	""
					>SHEWMS	
					>Only Competent Trained personnel to carry out Maintenance & operate	
Disattinging or calling a second list in top oil			Transmins / Transmins to 9 from		tooling	
Plant tipping or rolling over whilst in transit, being thrown from cab			Tramming / Transporting to & from workshop for maintenance purposes		>Reference to OEM Operation & Maintenance Manuals >Safety Essentials	
being thrown from cab			workshop for maintenance purposes		>Task Risk Assessment, Observations, Associated tools & permits	
					>Process - Move & Park Mobile Equipment at the Mobile Plant Workshop	
	VEO			40	>Process - Traffic Management Plan	-
	YES			13	>FOPS / ROPS (Fall On / Roll Over Protection Structure) installed	7
					>Seat belts worn & maintained	
					>Enclosed cabs, keeping windows & doors closed at all times	
					>VMP	
Inchility to play of an animum shilling plant			While under testing directing into		>Only competent trained, VOC'd personnel to operate Machinery >Reference to OEM Operation & Maintenance Manuals	
Inability to slow, stop, or immobilise plant			While under testing, directing into workshop area		Safety Essentials	
			workshop area		>Task Risk Assessment, Observations, Associated tools & permits	
					>Process - Move & Park Mobile Equipment at the Mobile Plant Workshop	
					>Process - Isolation & Tagging (WA)	
	YES			19	>SHEWMS	7
					>Only competent trained, VOC'd personnel to operate Machinery	
					>Fit for purpose tools	
					>Machines serviced and repaired regularly to ensure safe operation	
					>Emergency stops fitted at operator station and ground levels >PPE	
Normal movement of plant (ie collisions with			Moving in, around & out of the		>Reference to OEM Operation & Maintenance Manuals	
persons, traffic or objects)			workshop area, Pedestrian traffic and		>Safety Essentials	
,			pedestrian/ vehicle interaction		>Traffic Management Plan	
	YES			19	>Process - Move & Park Mobile Equipment at the Mobile Plant Workshop	7
	120			13	>Only competent trained, VOC'd personnel to operate Machinery	•
					>SME Exclusion zones	
					>Perform Plant Pre-Start & Safety Inspections >PPE	
Uncontrolled or unexpected movement of			When machinery is parked in workshop		>Reference to OEM Operation & Maintenance Manuals	
plant, components or implements or material			for repairs / servicing.		>Task Risk Assessment, Observations, Associated tools & permits	
ľ					>Process - Move & Park Mobile Equipment at the Mobile Plant Workshop	
	YES			20	>Process - Isolation & Tagging (WA)	6
					>SHEWMS	•
					>Plant chocked >Energy systems de-energised	
					>Cleaning procedures	
Unauthorised access and operation			Operator station		>Only competent trained, VOC'd personnel to operate Machinery	
	YES			19	>Disciplinary process	3
					>Lockable cabs	
Damage to surfaces etc caused by plant			Tyres, plant, undercarriage		>Reference to OEM Operation & Maintenance Manuals	
movement in & around the workshop area					>Task Risk Assessment, Observations, Associated tools & permits	
					>Process - Move & Park Mobile Equipment at the Mobile Plant Workshop	
	YES			20	>Process - Isolation & Tagging (WA) >SHEWMS	3
					>Concrete floors and aprons to be protected from contact using a	
					protection plate/pad/in built rails, heavy duty rubber	
					>Housekeeping, pre washing of floors before plant enters w/s	
Moving objects due to parts or work pieces		NO				
breaking (disintegrating),		.10				

Mechanical Hazards - Falling objects / Ejected r	materials					
Material/Objects falling from working area		NO				
Failure resulting in loss of contents or load		NO				
Falling objects	YES		Potential for objects to fall on lower working areas	17	>Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >SHEWMS >Footprint of work area cordoned off >Exclusion zones around area where plant maintenance is being undertaken at height >PPE	8
Work pieces/materials ejected	YES		When Jacking	17	>Task Risk Assessment, Observations, Associated tools & permits >Safety Essentials >SHEWMS >Process - Isolation & Tagging (WA) >Process - Jack and Support Equipment >Footprint of work area cordoned off >PPE	8
Plant or Loads moving/falling due to power		NO				
loss or plant failure Mechanical Hazards / Hazardous events due to						
Overloading of plant		NO				
Inadequate mechanical strength of Plant or parts	YES	NO	Potential in any assembly or supplied items	13	>National Standard for Plant [NOHSC: 1010 (1994) >Any modifications to equipment to follow manage change procedures >Equipment only sourced from reputable suppliers	7
Failure of loading controls		NO				
Inadequate design/selection of pulleys, drums, chains etc		NO				
Abnormal conditions of assembly/testing/use/maintenance	YES		When testing machine	15	>Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >Only Competent Trained personnel to carry out Maintenance >Only competent trained, VOC'd personnel to operate Machinery	7
Location of plant in workplace and/or proximity to other hazards (i.e. traffic movt)	YES		Plant	12	>Process - Move & Park Mobile Equipment at the Mobile Plant Workshop	2
Death or serious injury due to uncontrolled tyre handling or inflation	YES		Changing or inflating tyres	19	>Changing of tyres will not happen onsite due to no tyre fitters. >Tyre repairs to be outsourced	1
Inadequate mechanical strength of Tooling	YES		Potentially all tooling being used while conducting maintenance	13	>Reference to OEM Operation & Maintenance Manuals >Only Competent Trained personnel to carry out Maintenance >Process - Inspect & Maintain Tooling >SHEWMS >Only certified and purpose built tooling to be used when undertaking pulling/pushing/lifting tasks on mobile plant	3
Change G.E.T, Cuts, lacerations, manual handling		NO				
Chemical or Biological		-	·			
Contact with or inhalation of harmful fluids, gases, mists, vapours, dusts etc	YES		Fuel and hydraulic components, systems when performing mechanical maintenance tasks & inspections		>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >Process - Develop Mobile Plant and Equipment Specifications >SHEWMS >MSDS read & understood >Well ventilated workshops, work out doors >Water Cart for dust suppression >Emergency showers and eyewash stations available >PPE	
Pressure						

		ı		ı		1
Contact with fluids or gas under pressure during maintenance	YES		Plant fuel, hydraulic, grease components & systems.	20	>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >Process - Inspect & Maintain Tooling >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Decals & warning singe in areas of potential hazard >All systems are to be "vented" prior to performing maintenance on that system. >PPE	8
Striking due to severed high pressure hoses/couplings	YES		High pressure air and hydraulic hoses when performing mechanical maintenance tasks	20	>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >Process - Inspect & Maintain Tooling >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Decals & warning singe in areas of potential hazard >All systems are to be "vented" prior to performing maintenance on that system. >PPE	8
Isolation and venting of pressure energy sources	YES		Hydraulic systems	20	>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >Process - Inspect & Maintain Tooling >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Decals & warning singe in areas of potential hazard >PPE >All systems are to be "vented" prior to performing maintenance on that system. >PPE	8
Electrical Hazards						
Contact via damaged or poorly maintained electrical leads and cables	YES		Battery box, battery cables, starter motor,	19	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >SHEWMS >Process - Isolation & Tagging (WA) >Machines serviced and repaired regularly to ensure safe operation >Only Competent Trained personnel to carry out Maintenance >PPE	6
Overloading of electrical circuits Inability to isolate electrical energy sources	YES	NO	Battery isolator required for all units on site	20	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Supplier Plant & Vehicle Inspection form >Machines serviced and repaired regularly to ensure safe operation >PPE	2
Contact with overhead power lines	YES		Operators Station	13	>Only Competent Trained personnel to carry out Maintenance >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >SHEWMS >Traffic Management Plan. >Only competent trained, VOC'd personnel to operate Machinery >Decals & warning singe in areas of potential hazard	11

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Stored energy in electrical systems – batteries	YES		Battery box	19	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Decals & warning singe in areas of potential hazard >Battery lid lined with rubber, >Wherever possible use sealed batteries.	11
Thermal						
Exposure to mechanical, pressure, electrical or other energy source due to residual energy stored in system	YES		Radiators, hydraulic, steering & lines	13	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >SHEWMS >Only Competent Trained personnel to carry out Maintenance >All systems are to be "vented" prior to performing maintenance on that system >System in place for de-energising store energy >PPE	7
Engulfment, entrapment or damage by fire	YES		Engine compartment,	22	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Secondary escape route >Fire extinguishers AS1851 & AS2444 fitted to all units	11
Exposure to Radiation causing burns	YES		During welding, oxy/acetylene work, Hot compartments	22	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >Safety Essentials >Process - Manage Welding Requirements and Controls >Process - Oxy - Acetylene Cutting Equipment >SHEWMS >Only Competent Trained personnel to carry out Maintenance >AS 4839-2001 : The safe use of portable and mobile oxy-fuel gas systems for welding, cutting, heating and allied processes >PPE	11
Liquid Nitrogen		NO				
Explosion / Fire						
Ignition of flammable atmosphere or material by plant, process or materials where there is the potential for the build-up of fuel, rags or rubbish	YES		Engine bay, around exhausts, hydraulic systems	19	>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Fire extinguishers AS1851 & AS2444 fitted to all units >Decals & warning singe in areas of potential hazard >Good housekeeping >Waste disposal in accordance with environmental plan >PPE	7

Ignition of flammable atmosphere or material by plant, process or materials	YES		While using Oxy/acetylene on plant during repairs	19	>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >Process - Oxy - Acetylene Cutting Equipment >SHEWMS >Only Competent Trained personnel to carry out Maintenance >AS 4839-2001 : The safe use of portable and mobile oxy-fuel gas systems for welding, cutting, heating and allied processes >Fire extinguishers AS1851 & AS2444 fitted to all units >Decals & warning singe in areas of potential hazard >Good housekeeping >PPE	7
Ignition of flammable atmosphere or material caused by spilling of fuel or oil onto hot surfaces whilst servicing plant	YES		Engine bay, around exhausts, hydraulic systems	19	>Reference to OEM Operation & Maintenance Manuals >Safety Essentials >Task Risk Assessment, Observations, Associated tools & permits >Process - Isolation & Tagging (WA) >Process - Refuel Mobile Powered Plant >SHEWMS >Only Competent Trained personnel to carry out Maintenance >Fire extinguishers AS1851 & AS2444 fitted to all units >Decals & warning singe in areas of potential hazard >Good housekeeping >Naked flames including smoking should not permitted with 15 metres of fuel areas >PPE	7
Interference with remote detonation equipment		NO				
Slips/ Trips/ Falls						
Uneven or slippery work or access surfaces on plant, Trip Hazards	YES		Potentially any work area on or around plant where maintenance is undertaken	20	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >Safety Essentials >SHEWMS >Decals & warning singe in areas of potential hazard >Housekeeping >3 point contact >Hand rails and steps >Tool bags to be used. >Purpose built stands/supports provided	8
Housekeeping hazards produced by the plant	YES		Plant Oil, fluid leaks. Dirt/material hang up.	20	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >Safety Essentials >SHEWMS >House keeping >Washing of plant before entry to workshop area >Waste disposal processes followed >Drip trays to be placed under leaks. >Leaks to be managed/repaired to minimise risk of slips/falls and environmental impact.	8
Inadequate work platforms (size, location, fall protection). Lack of guardrails or fall protection	YES		Machine deck; operators station any area outside designated walkways and access platforms being accessed for plant maintenance	20	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >Safety Essentials >SHEWMS >Use of purpose built work platforms; >EWP's >Purpose built tooling to minimise at risk behaviours	8

Risk Assessment (Maintenance)

Access (ladders, stairs, walkways) to and from the plant	YES		>Access steps/platform to operators station	19	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >SHEWMS >	11
Lack of guardrails or fall protection	YES		Where ever there is a risk of falling from one level to another causing injury or death.	25	>Access steps/platform and handrails fitted as per the manufacturer >Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits >Safety Essentials >SHEWMS >Decals & warning singe in areas of potential hazard >Work to height requirement at 1.8 mtr, Process - "Height Work (work at)" >Fall Restraint to be used above 1.8 meters >Maintain 3 points of contact, always facing machine >Tool bags to be used >Work Platforms with Handrails, Kick rails. Inspected, checked regularly >Only competent trained personnel to carry out Maintenance >Segregated, isolated, designated flat working area	11
Collapse of the supporting structure (i.e. mobile crane boom, batch plant, tower crane)		NO				

Atmospheric contamination						
Exhaust fumes			Diesel engines operating during		>Reference to OEM Operation & Maintenance Manuals	
Extiguat fullica			troubleshooting & live testing		>Task Risk Assessment, Observations, Associated tools & permits	
			troubleshooting & live testing			
					>Safety Essentials	
	YES			20	>Process - Isolation & Tagging (WA)	7
	. 20				>SHEWMS	•
					>Exhaust directs fumes away from the machine	
					>Diesel engines only operate where there is sufficient air	
					>PPE	
Dust, fibres, vapours			Dirt and debris around machine		>Reference to OEM Operation & Maintenance Manuals	
Duot, Horoc, Yapouro					>Task Risk Assessment, Observations, Associated tools & permits	
					Safety Essentials	
	VEO			40	SHEWMS	•
	YES			12		6
					>House keeping	
					>Washing of plant before entry to workshop area	
					>PPE	
Lack of oxygen		NO				
Confined spaces associated with the plant		NO				
Thermally generated fumes		NO				
Environmental contamination from fumes,		NO				
mists and solids to atmosphere		NO				
Working environment and ergonomics						
Inadequate lighting levels	YES		Engine bay, under machine	13	>External lighting source, Torches, Headlamps	1
Glare from artificial light or natural light		NO	3	-		
Placement and identification of controls			Operator station		>Reference to OEM Operation & Maintenance Manuals	
			operator station		>Only Competent Trained personnel to carry out Maintenance	
	YES			19	>Controls in Operator station are all legible and in standard position	1
			On a set an atation		>Decals & warning singe in areas of potential hazard	
Seating design or seating location - Poor	YES		Operator station	19	>Reference to OEM Operation & Maintenance Manuals	6
posture during test drives					The seating provided is fully adjustable with lumbar support.	
Poor visibility of work area afforded from	YES		Applies in some maintenance	20	>Process - Move & Park Mobile Equipment at the Mobile Plant Workshop	6
control position	IES		operations - Workshop area	20	>Only competent trained, VOC'd personnel to operate Machinery	U
Human error or behaviour aspects (Human	1/70		Operator station		>Only competent trained, VOC'd personnel to operate Machinery	_
factors)	YES			20	>Only competent Trained personnel to carry out Maintenance	6
Manual handling tasks associated with the			Any maintenance task		>Task Risk Assessment, Observations, Associated tools & permits	
plant			7 mg mamorianoo taok		>Process - Manual Handling (Hazardous Manual Tasks)	
piani	YES			17	SHEWMS	6
					>Only competent Trained personnel to carry out Maintenance	
Cramped or restricted work spaces			Engine bay, under machine, under cab,		>Task Risk Assessment, Observations, Associated tools & permits	
(particularly for maintenance)	YES		between wheels, rollers, frame	17	>Process - Manual Handling (Hazardous Manual Tasks)	7
	123			17	>Process - Isolation & Tagging (WA)	•
					>SHEWMS	
Noise levels - NIHL (Noise Induced Hearing			Potentially all areas of mechanical		>Process - Noise - Environmental	
Loss)		NO	workshop and boilermaker bays when	12	>PPE	6
,			plant maintenance is being undertaken			
Noise levels – Interference with			Potentially all areas of mechanical		>Process - Noise - Environmental	
communication or speech/hearing	YES		workshop and boilermaker bays when	13	>PE	1
communication or speech/nearing	123		plant maintenance is being undertaken	13	>Line of slight to be maintained	ı
Vibration		NO	plant maintenance is being undertaken		>Line or silght to be maintained	
Rain or moisture		INO	While working on the out side of plant.		>Task Risk Assessment, Observations, Associated tools & permits	
Ivalii oi ilioisture			withing working on the out side of plant.		SHEWMS	
	YES			17		7
					>Where rain or moisture causes an unsafe work place, work will cease till	
5		No			area is dry or safe	
Radiation (ionising – non ionising)		NO				
Temperature extremes						

Open flame, steam or heated air	YES		Oxy / Acetylene use as part of plant maintenance	17	>Task Risk Assessment, Observations, Associated tools & permits >SHEWMS >Process - Oxy - Acetylene Cutting Equipment	6
					>Process - Hot Work Permit >PPE	
Exposure to high or low temperature extremes (thermal comfort)	YES		Open work areas while performing maintenance	13	>Task Risk Assessment, Observations, Associated tools & permits >SHEWMS >PPE	6
Exposure to high or low temperature extremes	YES		Engine	13	>Task Risk Assessment, Observations, Associated tools & permits >SHEWMS	6
Condition and suitability of plant						
Age and condition	YES		Plant	19	>National Standard for Plant [NOHSC: 1010 (1994)] >Year of Manufacture 2006 >Process - Perform Plant Pre-Start & Safety Inspections >Process - Inspect plant, vehicles and equipment >Plant serviced as per manufactures requirements and project schedule	11
Poor Service and maintenance history	YES		Plant	19	>Process - Perform Plant Pre-Start & Safety Inspections >Process - Inspect plant, vehicles and equipment >Plant serviced as per manufactures requirements and project schedule	11
Frequency of use (high or low use or inappropriate duty cycle)		NO				
Not fit for purpose OR Unsuitable accessories/fittings		NO				
Inability to apply isolation/lock out devices	YES		Plant	21	Isolation fitted as per site requirements	6
Accessories in unsafe condition		NO				
Use in arduous environment		NO				
Modification from original design	YES		Potentially all areas of plant	19	Change Management undertaken to cover any modifications	6
System of work relating to the plant			Plant		Defended to OFM Operation 9 Maintenance Manuals	
Emergency procedures relating to the plant	YES			21	>Reference to OEM Operation & Maintenance Manuals >Emergency Preparedness and Response	7
Use of Permit to Work system	YES		Carrying out maintenance on plant	13	>Task Risk Assessment, Observations, Associated tools & permits >SHEWMS >Process - Permit to work >Only competent trained, VOC'd personnel to operate Machinery >Machine maintenance to be carried out off site	7
Communication systems associated with			Operator station / Workshop		>Process - Radio Usage and Communication	
plant operation	YES		operator station? Workshop	8	>Verbal communication permissible	2
Communication methods with plant operation		NO				
Start up and shut down procedures	YES		Plant	12	>Reference to OEM Operation & Maintenance Manuals >Only competent trained, VOC'd personnel to operate Machinery >Only Competent Trained personnel to carry out Maintenance	2
Storage or restoration to service requirements		NO				
Secure against unauthorised use/access	YES		Operator station / plant	12	>Only competent trained, VOC'd personnel to operate Machinery >Only Competent Trained personnel to carry out Maintenance >Remove key >disciplinary process	1
Other						
Refuelling	YES		Plant	25	>Reference to OEM Operation & Maintenance Manuals >Task Risk Assessment, Observations, Associated tools & permits > Process - Refuel mobile powered plant >SHEWMS	12
Tyre changing	YES		Plant	20	>Changing of tyres will not happen onsite due to no tyre fitters. >Tyre repairs to be outsourced	1