Treadfirst

RISK ASSESSMENT – Changing Wheels on Vehicles

ACTIVITY	PERSON AT RISK	SIGNIFICANT HAZARDS	RISK*			RISK CONTROL MEASURES	RESIDUAL RISK**		
			P	S	DR		P	S	DR
Preparing to change a wheel away from workshop	Driver and mechanic	Not ensuring vehicle is on hard standing may result in the failure of the vehicle jack	3	4	12	• Vehicle to be parked on a hard ground surface with handbrake applied, in gear and engine switched off before attempting to jack it up. • If this is not possible then a solid board should be used to rest the jack on and to spread the weight.	2	4	8
As above	As above	If the vehicle is parked by the roadside there may be a danger of being hit by other road users	3	4	12	• Vehicle to be parked away from the dangers of other road users. • Vehicle hazard warning lights to be used where fitted. • If on the motorway, vehicle to be parked on hard shoulder as far away from the roadway as possible and a warning triangle to be used to alert other motorists.	2	4	8
Use of vehicle jack	As above	Use of a faulty vehicle jack may lead to vehicle slipping and injuring staff	4	4	16	• Vehicle jacks to be checked on a regular basis to ensure that they operate correctly. • Hydraulic jacks to have their fluid level checked on a regular basis and topped up where necessary.	2	4	8
Loosening of wheel nuts	As above	Use of incorrect or worn tools may lead to abrasions to hands or back injuries	4	3	12	• Correct type and size of wheel brace to be used. • If nuts are very tight, use a piece of metal tubing to gain extra leverage. • Wheel nuts to be cracked-off when vehicle is on the ground, but not removed completely until vehicle is raised.	2	4	8

Lifting off wheel	Driver and mechanic	Incorrect lifting technique may lead to back injury	4	3	12	• The wheel to be grasped firmly and lifted from the wheel studs with the knees bent and the back kept straight. Assistance to be sought if necessary. • Wheel to be rolled to one side not carried.	2	3	6
Refitting replacement wheel	As above	Incorrect lifting technique may lead to back injury	4	3	12	• Wheel to be rolled into position not carried • The wheel to be grasped firmly and lifted onto the wheel studs with the knees bent and the back kept straight. Assistance to be sought if necessary.	2	3	6
Tightening wheel nuts	As above	Failure to tighten wheel sufficiently may lead to it becoming loose and causing an accident	3	4	12	• Wheel nuts to be tightened by hand initially whilst rotating the wheel to ensure that it is in its proper position. • Final tightening to be done using wheel brace on diagonally opposite nuts. Use a calibrated torque wrench to get the correct tightness and follow the manufacturer's torque settings • Nut tension indicators to be used on all HGV wheels.	2	3	6
Removing vehicle jack	As above	Failure to lower vehicle down steadily may result in it dropping and causing injuries	3	4	12	• The jack to be released slowly to ensure that it is completely free of the vehicle before it is removed.	2	3	6

Using compressed air	Driver and mechanic	Personal injury or fatality from air blast from a ruptured or burst tyre or wheel parts	4	5	20	• Use airline hoses long enough to allow the operator to stay outside the likely explosion trajectory during inflation. • Don't use 'unrestricted' airlines (i.e. without a gauge or pressure control device) or valve connectors that require the operator to hold them in place. • Don't exceed the manufacturer's recommended tyre pressure for the size and rating of the tyre. • A strong, safely secured safety cage and marked exclusion zone will be used for inflating HGV tyres. • The use of a fabric containment device when inflating tyres in the field will be considered.	2	4	8

PROBABILITY (P) = Remote (0) – Unlikely (1) – Possible (2) - Probable (3) – Very Likely (4) – Certain (5)

SEVERITY (S) = No injury (0) – Minor Injury (1) – First-aid Injury (2) – 3 Day Injury (3) – Major Injury (4) – Fatality/Disability (5)

DEGREE OF RISK (DR) = PROBABILITY x SEVERITY

* Risk identified in the absence of any control measures in place.

** Residual risk is the level of risk that remains after suitable and sufficient risk control measures are introduced

Signature Sheet

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1	01/02/2025	Original document drafted	Keith Ambrose
2			
3			
4			

Risk Assessment Matrix – Multiply the scores Probability (P) x Severity (S) to determine Degree of Risk (DR)

			Probability					
			(0) Remote	(1) Unlikely	(2) Possible	(3) Probable	(4) Very Likely	(5) Certain
Severity	No Injury	(0)	0	0	0	0	0	0
	Minor Injury	(1)	0	1	2	3	4	5
	First-Aid Injury	(2)	0	2	4	6	8	10
	3 Day injury	(3)	0	3	6	9	12	15
	Major injury	(4)	0	4	8	12	16	20
	Fatality/Disability	(5)	0	5	10	15	20	25

Low	**0 - 2**	**Monitor**	Tolerable risk. No additional controls required. Employees made aware of safe/correct systems of work.
Medium	**3- 9**	**Improvement**	Action may be required to further reduce the risk to acceptable level. Periodic review of process or activity.
High	**10 +**	**Immediate Action**	Unacceptable risk. Stop activity immediately. Inform next level of management and refer to Safety Co-ordinator. Possible cessation/withdrawal of process or activity