

CONVERSION GUIDELINES FOR EARTHMOVING EQUIPMENTS TRADE THEORY FROM NATED (N) COURSES TO UNIT STANDARDS (US)

The purpose of this skills programme is for the successful learner to gain access to the relevant trade test and not to gain credits or part of credits as only relevant specific outcomes addressing the theory part are to be achieved

LEARNING ACTIVITIES	UNIT STANDARD TITLE	MATERIAL AVAILABLE	UNIT STANDARD ID	THEORY	
				SPECIFIC OUTCOME NUMBER	SPECIFIC OUTCOME
Gearbox	Maintain gearboxes	Yes	13325	SO 8	Discuss and explain incidents and problems related to gearbox maintenance
Drive shaft/Final drives	Install vehicle drive train components	Yes	15099	SO 6	Discuss and explain vehicle component installation task
	Remove vehicle drive train components	No	15101	SO 6	Discuss and explain vehicle drive train component removal task
	Dismantle vehicle drive train components	Yes	15114	SO 6	Discuss and explain vehicle component dismantling task
	Repair and assemble earthmoving equipment drive train components	Yes	15134	SO 6	Discuss and explain drive train component repair and assembly task
Universal Joints	Test welded joints	No	262714	SO 1	Demonstrate knowledge of different types of welds
Differential/Rear axles	Repair vehicle differentials	No	244107	SO 3	Repair and assemble the differential.

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Review: Learning Programme Manager		Approved: CEO	

	Diagnose and repair automotive components	No	260657	SO 4	Repair the faults.
Suspension	Repair suspension systems	No	244135	SO 3	Repair the suspension system and restore the vehicle.
Steering gear/ Wheel alignment	Check and adjust steering geometry	Yes	15100	SO 8	Discuss and explain reasons for checking and adjusting steering geometry
	Balance a wheel	No	15120	SO 4	Apply safety procedures relating to wheel balancing
Brakes	Maintain brakes and clutches	Yes	13282	SO 9	Discuss and explain incidents and problems related to brake and clutch maintenance
Fuel supply, Injectors, Combustion chambers	Demonstrate knowledge of fuel supply and engine management systems	No	260679	SO 1	Demonstrate knowledge of fuel supply principles
				SO 2	Demonstrate knowledge of carburetted system
				SO 3	Demonstrate knowledge of throttle body injection (TBI) system
				SO 4	Demonstrate knowledge of continuous fuel injection system
				SO 5	Demonstrate knowledge of pulsed fuel injection system
	Demonstrate knowledge of mechanical fuel injection systems	No	244046	SO 1	Demonstrate knowledge of the principles and operation of a mechanical fuel injection system
				SO 2	Demonstrate knowledge of low-pressure fuel injection system components
				SO 3	Demonstrate knowledge of high-pressure fuel injection systems

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				SO 4	Demonstrate knowledge of injector pump timing
	Demonstrate knowledge of petrol fuel injection and engine management systems	No	244050	SO 1	Demonstrate knowledge of petrol fuel injection principles
				SO 2	Demonstrate knowledge of throttle body injection (TBI) system
				SO 3	Demonstrate knowledge of continuous fuel injection system
				SO 4	Demonstrate knowledge of pulsed fuel injection system
				SO 5	Demonstrate knowledge of and identify the components of petrol engine management systems
				SO 6	Demonstrate knowledge of air pollution and vehicle exhaust emissions
				SO 7	Demonstrate knowledge of emission control for spark-ignition engines
	Diagnose and repair fuel system components	No	260639	SO 5	Apply safety procedures during the repair and assembly task
	Repair internal combustion engines	No	253425	SO 1	Explain the factors critical to repairing internal combustion engines

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