

## CONVERSION GUIDELINES FOR DIESEL MECHANIC 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
Fuel System	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 4	Demonstrate knowledge of continuous fuel injection system
				SO 5	Demonstrate knowledge of pulsed fuel injection system
				SO 7	Demonstrate knowledge of air pollution and vehicle exhaust emissions
	Diagnose and repair fuel system components	No	260639	SO 1	Read and interpret the job instructions
				SO 2	Prepare to conduct tests
				SO 5	Apply safety procedures during the repair and assembly task

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Review: Learning Programme Manager		Approved: CEO	

				SO 6	Restore work area, complete and process documentation
	Understand the fundamentals of engine technology	No	244056	SO 1	Identify the various types of automotive engines and engine operation
				SO 3	Explain engine design classifications
				SO 4	Explain the various automotive engine systems, their functions and associated components
				SO 5	Explain safe working practises related to automotive engines
	Remove and install fuel system components	No	244170	SO 1	Demonstrate knowledge of the functions of fuel system components
	Test and adjust exhaust emission gases	No	244127	SO 1	Read and interpret the job instructions
SO 4				Apply safety concepts during diagnosing and repairing of fuel injection systems	
Sparks Ignition System: Function and operation of coil ignition mechanical and vacuum advance mechanisms; dwell and coil saturation; Condensers, spark plugs	Diagnose and repair vehicle ignition systems	No	260737	SO 1	Read and interpret the job instructions
	Service and repair conventional automobile ignition systems	Yes	12220	SO 1	Read, discuss and interpret automobile conventional ignition system circuit diagrams and symbols
				SO 2	Select, explain and discuss the various components used in automobile conventional ignition systems
Carry out post installation checks on a remanufactured engine	No	244117	SO 2	Understand confirmed checks an ignition system on a petrol engine	

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	Test and report on condition of vehicle starting and charging system	No	260637	SO 5	Complete fault finding reports
Explain gearbox: Types of gears (spur, helical, double helical, gear trains, operation of three and four	Remove and fit automobile components	Yes	260717	SO 1	Prepare to remove or fit automobile
	Diagnose and repair automatic transmissions	No	260658	SO 1	Read and interpret the job instructions
				SO 6	Restore work area, complete and process documentation
	Demonstrate knowledge of forced induction performance enhancing systems	No	244133	SO 1	Demonstrate knowledge of engine performance and efficiency
				SO 2	Demonstrate knowledge of supercharging systems
				SO 3	Demonstrate knowledge of turbo charging systems
	Diagnose and repair forced induction systems	No	260678	SO 1	Read and interpret the job instructions
				SO 6	Restore work area, complete and process documentation
	Repair manual transmissions	No	244143	SO 1	Read and interpret the job instructions
				SO 6	Restore work area and complete and process documentation
Explain propeller & drive shaft, universal and cv	Install vehicle drive train components	No	15099	SO 6	Discuss and explain vehicle component installation task

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joints	Diagnose and repair steering system components	Yes	244144	SO 1,4	Check the operational condition after adjustment
Explain final drives and differentials	Repair vehicle differentials	No	244107	SO 1,3,4	Repair and assembly the differential. Check the operational condition after assembly. Interact with others relating to checking and adjusting steering geometry
	Dismantle automotive main components	No	244053	SO 2	Install sub-component to vehicle and test operation
Explain suspension and shock absorbers	Assemble mechanical components	No	253440	SO 1	Identify, discuss and demonstrate mechanical assembly methods and techniques
	Check and adjust steering geometry	No	15100	SO 3	Perform wheel alignment and adjustment
	Check and adjust steering geometry	No	15100	SO 8	Discuss and explain reasons for checking and adjusting steering geometry
	Diagnose and repair steering system components	Yes	244144	SO 2	Explain the function and operation of a steering system

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