

CONVERSION GUIDELINES FOR ARMATURE WINDER 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
Revision of simple lap and wave winding	Perform basic winding/rewinding of electro-mechanical components	No	9921	SO 1	Prepare for work activities
Connection of compound-wound dc machines	Install, test and maintain single phase AC/DC machines and control gear	Yes	13141	SO 6	Record information on work done.
Equalising windings	Assemble complex components	Yes	9923	SO 1	Plan and prepare for assembly.
The e.m.f. equation of the d.c generator and the torque equation of d.c. motors. (No derivation or calculations required - formulae to be used as the basis of fault diagnosis)	Overhaul the torque converter of a self-propelled mobile	No	10872	SO 1	Explain the factors critical to overhauling the torque converter of a self-propelled mobile machine.
				SO 4	Test the torque converter and prepare for operation and/or production
Determination of the approximate gauge of wire for given current rating	Assemble complex components	No	9923	SO 2	Prepare to overhaul the torque converter.

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Review: Learning Programme Manager		Approved: CEO	

Armatures with former-wound coils: Winding of coils, taping coils; insulating coil supports and slots; connecting coils end to commutator	Perform winding/rewinding of complex electro-mechanical; components	No	12392	SO 1	Prepare for work activity.
Dipping, banding and drying of armatures	Coat material and components	Yes	9887	SO 1	Plan and prepare for work activity.
Testing of armatures	Perform winding/rewinding of complex electro-mechanical components	No	12392	SO 1	Prepare for work activity.
Overhauling of larger d.c. machines: Location of possible mechanical defects; dismantling of machines, removal and replacement of sleeve and ball bearings, lubrication	Dismantle complex assemblies	No	9924	SO 1	Plan and prepare for dismantling activity.
				SO 2	Apply quality procedures and standards in work area
Repair of armature; Location and cutting-off defective coils; recording of winding data; removal of old coils; winding and forming of new coils	Apply quality procedures	No	13234	SO 1	Explain and discuss the quality assurance system and quality objectives, standards, elements
	Explain and use organisational procedures	Yes	12456	SO 1	Discuss the purpose of organisational policies and procedures
	Dismantle complex assemblies		9924	SO 1	Plan and prepare for dismantling activity.
Repair of commutator: Dismantle and tighten of commutator; repair of mica V-rings; undercutting of mica and chamfering of segments. Brush selection	Collect and record data	No	14051	SO 1	Explain community related data collection
	Dismantle basic components and sub-assemblies	No	244664	SO 1	Plan to dismantle components and sub-assemblies.
Repair of field coils: Tests for grounded, short-circuited and open circuited field coils; rewinding and assembly of coils	Perform winding/rewinding of complex electro-mechanical components	No	12392	SO 1	Prepare for work activity.
Reversal of p.d of generators and rotation of motors, correct polarity of interpoles	Perform winding/rewinding of complex electro-mechanical components	No	12392	SO 1	Prepare for work activity.

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Perform testing of d.c machines	Anticipate and troubleshoot machine functioning	Yes	9890	SO 3	Gather and analyse information to troubleshoot equipment problems.
				SO 4	Communicate equipment repair needs and preventive maintenance needs to maintenance specialists
	Conduct advanced tests on electro-mechanical components	No	244663	SO 1	Plan to test electro-mechanical components.
	Dismantle basic components and sub-assemblies	No	244664	SO 1	Plan to dismantle components and sub-assemblies.
Safety	Adhere to health and safety requirements	No	14897	SO 1	Set up protection and safety equipment for the working area.
				SO 3	Comply with Health, Safety and Welfare in the workplace.

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