



Australian Government

MSFPT3005 Re-string and re-pin a piano

Release: 1

MSFPT3005 Re-string and re-pin a piano

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers removing existing strings and pins from upright and grand pianos and replace them with new strings and pins, including disassembling and re-assembling the piano, assessing piano suitability for restringing, de-tuning piano, chipping up and measuring strings and pin positions for replacement. It applies in workplace and on-site environments for small to medium scale enterprise.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Competency Field

Unit Sector

Piano Technology

Elements and Performance Criteria

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1	Plan for re-stringing and re-pinning	1.1	Work health and safety (WHS) requirements, legislative requirements and workplace practices relevant to repairing pianos are verified and complied with
		1.2	Customer requirements are received, analysed and confirmed with appropriate personnel
		1.3	Communication with others involved with the work is established and maintained to ensure efficient work flow, coordination, personnel cooperation and safety
		1.4	Written instructions are followed
2	Prepare for repair	2.1	Tools and equipment are selected consistent with the needs of the job

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| | 2.2 | Selected tools and equipment are checked for service ability and safety, and any faults repaired and reported according to workplace practices |
| | 2.3 | Personal protective equipment is correctly fitted and used |
| | 2.4 | Materials required for the re-stringing and re-pinning of piano are selected |
| 3 | Assess piano | |
| | 3.1 | Correct posture for repairing is demonstrated which minimises fatigue and promotes muscular control |
| | 3.2 | Case parts are removed and stored |
| | 3.3 | Measurements of all string sizes are taken throughout piano |
| | 3.4 | Position of all pressure bars, duplex bars and under-stringing felts are noted |
| | 3.5 | Base strings are inspected for tone and quality, noting those needing replacement |
| 4 | Prepare piano for re-stringing | |
| | 4.1 | Length of strings are measured and recorded |
| | 4.2 | Piano is de-tuned |
| | 4.3 | Pressure bars/agraffes are removed |
| | 4.4 | Strings are removed by unwinding in order |
| | 4.5 | Bass strings are tagged for identification purposes using a wire guide to store until needed |
| | 4.6 | Tuning pins are removed and assessed for re-usability |
| | 4.7 | Samples of tuning pins, felts and eye strings are retained |
| | 4.8 | Size of new pins and drill holes are calculated for appropriate tension requirements |
| 5 | Re-pin and re-string piano | |
| | 5.1 | Stringing scale is re-calculated |
| | 5.2 | Agraffes are replaced in accurate position, as required |
| | 5.3 | Pins and treble strings are replaced in required order, with under-stringing felt inserted |
| | 5.4 | Pins and base strings are replaced in required order |

		5.5	Pressure bars are replaced in accurate position
6	Chip up piano	6.1	Pitch standard is established
		6.2	Strings are plucked and tuned individually against pitch standard
		6.3	Strings are rubbed down and process repeated until strings stabilised
7	Re-assemble piano	7.1	Piano is re-assembled
		7.2	Tools and equipment are maintained, cleaned and stored safely in designated location
		7.3	Records are maintained in accordance with enterprise requirements or industry practice
8	Clean up work area	8.1	All tools, materials and other equipment are checked, cleaned and returned to their appropriate location
		8.2	Work area is cleared and waste removed
		8.3	Workplace documentation is completed and filed

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit context includes:

- WHS requirements, including legislation, building codes, material safety management systems, hazardous and dangerous goods codes, and local safe operating procedures or equivalent
- work is carried out in accordance with legislative

	obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
	• work requires individuals to demonstrate some discretion, judgement and problem solving
Tools and equipment include:	• micrometre • tuning hammer • tuning fork • pitch standard • T hammer • string lifter • drills and bits • tension wrench • hammers and punches • wire cutters • pliers • vice grips • stringing tools • measuring equipment • re-scaling tools • knives • glue • plectrum • glove
Materials include:	• treble and bass strings • tuning pins • understringing felt • agraffes
Identification purposes include:	• name and address • brand name, style, size or serial number of piano • strings per note
Eye strings include:	• single wound German • double wound German • French eye
Under-stringing felt includes:	• string pillows • bearing felt • listing felt • pressure bar felt
Pitch standards include:	• piano • electronic keyboard • electronic tuning device (ETD) • tuning fork

Personal protective equipment includes:

- that prescribed under legislation, regulations and enterprise policies and practices

Information and procedures include:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturer specifications and operational procedures

Unit Mapping Information

Supersedes and is equivalent to LMFP3005A Re-string and re-pin a piano.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFPT3005 Re-string and re-pin a piano

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Performance Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices and re-string and re-pin a minimum of two (2) pianos, one (1) upright and one (1) grand
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- Communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems, interpret basic plans and follow safety procedures
- Avoid backtracking, work flow interruptions or wastage
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity

Knowledge Evidence

- State or territory WHS legislation, regulations, standards and codes of practice relevant to the full range of processes for re-stringing and re-pinning upright and grand pianos
- Organisational and site standards, requirements, policies and procedures for re-stringing and re-pinning upright and grand piano
- Reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- Environmental protection requirements relating to the disposal of waste material
- Established lines of communication and protocols
- Types, characteristics, uses, limitations and preparation of materials and equipment used in piano re-stringing and re-pinning
- Types of tools and equipment used to re-string and re-pin pianos and procedures for their safe use, operation and maintenance
- Relevant problem identification and resolution

- Set-up and operation of tools and equipment used for re-stringing and re-pinning pianos
- Storage systems and labelling
- Procedures for the recording, reporting and maintenance of workplace records and information
- Appropriate mathematical procedures for estimation and measurement

Assessment Conditions

- Assessors must:
 - hold training and assessment competencies as determined by the National Skills Standards Council (NSSC) or its successors
 - have vocational competency in the furnishing industry at least to the level being assessed with broad industry knowledge and experience, usually combined with a relevant industry qualification
 - be familiar with the current skills and knowledge used and have relevant, current experience in the furnishing industry.
- Assessment methods must confirm consistency of performance over time rather than a single assessment event and in a range of workplace relevant contexts.
- Assessment must be by observation of relevant tasks with questioning on underpinning knowledge and, where applicable, multimedia evidence, supervisor's reports, projects and work samples.
- Assessment is to be conducted on single units of competency or in conjunction with other related units of competency. Foundation skills are integral to competent performance in the unit and should not be assessed separately.
- Assessment must occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.
- Access is required to hand and power tools used to re-string and re-pin upright and grand pianos, safety and personal protective equipment, holding and supporting equipment, and upright and grand pianos.

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