

## TRAINING SCHEDULE FOR TIMEBASED APPRENTICES

## TOOL, JIG AND DIE MAKER

Introduction to the Industry:	Responsibilities, appearance and attitude in work situation.	28
Safety:	Basic safety precautions applicable in the trade to be practised throughout apprenticeship, with special reference to safe handling and care of hand tools, noxious and flammable gases, liquids and gases under pressure, electrical installations, machine protection, machine and pneumatic tools, grinding wheels, moving and overhead machinery and use of portable fire extinguishers. Theory and practice of first aid.	50
Knowledge of:		
Hand and workshop tools::	Care and use of tools. Making of work pieces and/or parts using the techniques of chipping, drilling, filing, reaming, sawing, scraping, screwing and tapping. Sharpening of cutting tools. Use of pullers and presses. Dressing, trueing, checking and mounting of wheels on grinding	
	machine. Use of securing, locking and sealing devices.	280
Brazing, soldering and welding:	Knowledge and use of gas and electric welding, lead and silver soldering processes. Knowledge of physical properties of various materials used in the motor industry.	120
Drawings:	Reading and interpretation of drawings.	350
Measuring:	Advanced knowledge of care and use of measuring instruments commonly used in the motor industry.	220
Basic work:	Knowledge of simple centre lathe work. The correct use of feeds and speeds for different materials and operations. Operating shaping and drilling machines. Preparation of dies and machine drawings, including instruction in types of presses and ancillary equipment which influence die design. Operating tool grinding machines, lathes, milling and manual or automatic copying the milling machines (including use of dividing head). Knowledge of heat	
	treatment and the cleaning and/or polishing of dies.	900

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Page Number	Page 1 of 2	*Last Revision Date		
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More advanced work: Making and repair of templates, jigs and fixtures. Laying out impression plates. Making of dies for moulding and/or castings, including use of epoxy resins. Instruction in moulding techniques, including hard facing. Blacksmith training in the manufacture of high speed steel chisels and form punches and forging dies of the types used for bench work in impression sinking. Marking out of the profile impressions with top and bottom edges and incorporating the necessary draft angles. Marking out of leads to ensure that component is within tolerances in all respects with the necessary contraction allowances. 1 452 Revision and independent work:

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