



TRAINING SCHEDULE FOR TIMEBASED APPRENTICES

AUTOMOTIVE ELECTRICIAN

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 small pullers and arbor presses. Dressing, trueing, checking and mounting of wheels on grinding machines. Use of securing, locking and sealing devices. Uses of and precautions in connection with electrical measuring instruments.	100
Brazing, soldering and welding:	Knowledge and use of gas and electric welding soldering processes.	90
Drawings:	Reading and interpretation of electrical diagrams from workshop manuals and bulletins.	60
Power unit:	Knowledge of function and different forms of energy and the workings of internal combustion engines.	156
Electrical principles:	Knowledge of battery, volts, amps, ohms, watts, magnetism and the workings of parallel switches. Function of distributor coil and spark plugs. Elementary knowledge of starter motors, alternators, generators, regulators, pre-heating and other electrical cold starting devices. Knowledge of electronic ignition systems. Elementary knowledge of mechanical fuel injection systems. Knowledge of electronic fuel injection systems.	756

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Ball and roller bearings:	Knowledge of types of bearings used in motor industry. Making of simple calculations and identifications of worn and defective bearings.	60
Batteries:	Battery maintenance – servicing, charging, testing, sealing; diagnosis and internal examination of batter fast and slow chargers.	600
More advanced training:	Testing, servicing, repair and adjustment of cut outs, regulators, solenoid switches, panel instruments, circuits, switches, lamps and horns, heater fans, relays, rheostats, traffic indicators, windshield wiper motors, electrical fuel pumps, electrical transmission controls and alternators and their regulators. Overhaul and testing of starter motors and drives. Servicing, testing and timing of magnetos. Overhauling, testing and polarising of generators. Rewiring of motor vehicles and reading wiring diagrams. Trouble shooting: Checking for open circuits, short circuits, earths, resistance and voltage drop. Fitting of car radios and aerials. Fitting of speed control systems.	1 500
Revision and independent work:		

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